



Des Gillen President BP-Husky Refining LLC 4001 Cedar Point Road Oregon, OH 43616 P 567.698.4529 des.gillen@se1.bp.com

City of Toledo Division of Environmental Services 348 S. Erie Street Toledo, OH 43604

Attn.: Peter Park

RE: CMS Summary & Data Assessment Report – 3rd Quarter 2021

Dear Sir or Madam:

Attached is the revised CMS Summary Report and Data Assessment Report for BP-Husky Refining LLC for the period of July 1, 2021 through September 30, 2021.

CMS Summary Report (Attachment A)

A complete list of emissions units and pollutants monitored are in Table 1; Summary Reports are included in Attachment A. Excess Emissions and Monitoring Systems Performance Report is not required under 40 CFR 60.7(d) if the total duration of excess emissions is less than 1% and the CMS downtime is less than 5% of the total operating time for the quarter. Unless where noted in Table 1, these criteria were met for the units listed. All future reports will have downtime and excess emissions for gases reported in hours as described in 40 CFR 60.7(d).

Table 1. Emission Units and Pollutants Monitored

Location/Emission Unit	Parameter	Quarter 3 2021 Downtime (% unit operating time)	Notes
TIU Fuel Gas Mix Drum			
- B015 - Crude 1 Furnace		0.05	
- B017 - Coker 2 Furnace		0.05	
- B019 - Crude Vac 2 Furnace		0.05	
- B022 - Naphtha Treater Furnace		0.05	
- B029 - DHT A-Train Furnace]	0.05	
- B030 - BGOT Furnace	H₂S in Fuel Gas	0.05	
- B031 - Vac 1 Furnace	Gas	0.05	
- B032 - Coker 3 Furnace		0.05	
- B033 - East B-GOT Furnace		0.05	
- B034 – East Alstom Boiler]	0.00	
- B035 – West Alstom Boiler		0.05	
- P007 - FCC/CO Boiler		0.05	

Location/Emission Unit	Parameter	Quarter 2 2021 Downtime (% unit operating time)	
TIU Fuel Gas Mix Drum			
- B015 - Crude 1 Furnace		0.27	
- B019 - Crude Vac 2 Furnace		0.30	
- B022 - Naphtha Treater Furnace		0.27	
- B029 - DHT A-Train Furnace	Total Sulfur in	0.27	
- B030 - BGOT Furnace	Fuel Gas	0.30	
- B031 - Vac 1 Furnace		0.27	
- B032 - Coker 3 Furnace		0.28	
- B033 - East B-GOT Furnace		0.30	
- B034/B035 – East & West Alstom Boilers		0.27	
East Side Fuel Gas Mix Drum			
- B008 - Iso 2 Feed Heater	H₂S in Fuel	0.00	
- B009 - Iso 2 Stabilizer Reboiler	Gas	0.00	
- B010 - Iso 2 Splitter Reboiler		0.00	
B036 - Reformer 3 Furnace	H ₂ S	0.05	
P003 - East Flare (see note A)	H ₂ S	0.09	
P003 - East Flare	Total Sulfur	0.72	
P004 – West Flare Vent Gas (see note A)	H ₂ S	0.18	
P004 – West Flare "C-Valve" Vent Gas	H ₂ S	0.05	
P004 – West Flare Vent Gas	Total Sulfur	0.45	
P004 – West Flare "C-Valve" Vent Gas	Total Sulfur	0.27	
B036 – Reformer 3 Furnace	NOx	0.00	
P007 – FCCU/CO Boiler Bypass (see note B)	СО	0.00	
P007 – FCCU/CO Boiler Bypass (see note B)	NOx	0.00	
P007 – FCCU/CO Boiler Bypass (see note B)	SO ₂	0.00	
P007 – CO Boiler Exhaust	CO	0.00	
P007 – CO Boiler Exhaust	NOx	0.00	
P007 – CO Boiler Exhaust	SO ₂	0.00	
P009 - Sulfur Recovery Unit with #1	SO ₂	0.05	Excess emissions > 1%
P037 - Sulfur Recovery Units #2 & #3	SO ₂	0.09	
B034 – East Alstom Boiler (see note C)	NOx	0.00	
B035 – West Alstom Boiler (see note C)	NOx	0.00	

Note A: P003/P004 East & West Flare

The attached H_2S tables identify all emissions in excess of the Subpart Ja H_2S limit of 162 ppm $_V$ on a 3-hour rolling average. If an event did not occur for 3 consecutive hours, then it does not meet the 3-hour averaging requirement and therefore is not considered excess emissions. If a 3-hour event exceeds the 100,000 ppm $_V$ span limit of the H_2S CMS, then the Total Sulfur analyzer data was used for the H_2S value.

Note B: P007 - FCCU/CO Boiler Bypass

The purpose of these CEMS are to continuously monitor the listed (CO, NOx, & SO₂) emissions from the FCCU Regenerator exhaust in the event of a CO Boiler bypass while there is feed to the FCCU. Otherwise, compliance with the listed limits for the FCCU is determined from continuous emissions monitoring of the CO Boiler Exhaust stack. Although this source is not subject to 40 CFR Part 60, Section C.12.(d)(7) of P0104782 (as set forth by Permits-to-Install 04-01290 and P0105902) requires monitoring per 40 CFR Part 60.11. As

noted in Section C.12.(e)(4) of P0104782, the refinery has opted to follow the reporting requirements under 40 CFR 60.7. 40 CFR 60.7(c) requires the submission of an Excess Emissions and Monitoring Systems Performance Report and Summary Report Form.

Note C: B034/B035 East & West Alstom Boiler
The attached data tables include supplemental reporting for NOx CEMS records required by 40CFR49b(i).

Details of all downtime or excess emission incidents are provided in the summary tables in Attachment A.

Data Assessment Report (Attachment B)

In accordance with the terms and conditions of their permits, Attachment B includes the Continuous Emission Monitor (CEM) Data Assessment Report (DAR) for this quarter. Table 2 below is a summary of Cylinder Gas Audits conducted this quarter. Where noted in Table 2, Relative Accuracy Test Audits (RATAs) were conducted this quarter; these reports were submitted previously via Air Services.

Table 2. Cylinder Gas Audit Summary

Location/Emission Unit	Parameter	Notes
East Side Fuel Gas Mix Drum (B008, B009, B010)	H2S	
TIU Fuel Gas Mix Drum (B015, B017, B019, B022, B029, B030, B031, B032, B033, B034, B035, P007)	H₂S	
B036 - Reformer 3 Heater H2S CMS	H₂S	
P003 - East Flare	H₂S	
P004 - West Flare	H₂S	
P003 - East Flare (low & high ranges)	Total Sulfur	
P004 - West Flare (low & high ranges)	Total Sulfur	
TIU Fuel Gas Mix Drum (B015, B017, B019, B022, B029, B030, B031, B032, B033, B034, B035, P007)	Total Sulfur	
B036 - Reformer 3 NOx/O2 CEMS	NOx, O ₂	
B034 - East Alstom Boiler	NOx, O ₂	
B035 - West Alstom Boiler	NOx, O ₂	
P007 - FCCU/CO Boiler	SO ₂ , NOx, CO, O ₂	
P007 - FCC Regen Line	SO ₂ , NOx, CO, CO ₂ , O ₂	
P009 - SRU #1	SO ₂ , O ₂	
P037 - SRU #2 & #3 (TRP SRU)	SO ₂ , O ₂	

The DAR also includes out-of-control (OOC) times for the FCCU/CO Boiler CO CEMS, FCC Regen Line CO, O_2 , & CO_2 CEMS, the SRU#1 SO₂ & O_2 CEMS, and the TRP SRU SO₂ & O_2 CEMS based on the OOC requirements defined by the MACT general requirements, 40 CFR Part 63.8(c)(7).

CEMS calendar tons reporting

During our Title V permit review and renewal process, the requirement to include calendar tons per quarter for certain pollutants was identified. This has not been included in prior quarterly CMS reports but the information is available, if requested. Table 3 below includes the required information.

Table 3. CEMS Reporting requirement with calendar tons

_	- 1		1		
Page	Citation	EU	Description	Language	Tons/qtr
				Units subject to NSPS Ja NOx monitoring - quarterly reports require "the total	
63	B.5.b)(2)b.v	B036	Reformer Heater	NOx emissions for the calendar quarter (tons)" to be included with the	6.66
				quarterly EER for NOx CEMs	
101	c.12.e)(2)b.v	P007	FCCU	Quarterly EER required for SO2 CEM requires "the total SO2 emissions for	117.67
101	C. 12.e)(2)D.V	F007	FCCO	the calendar quarter (tons)" to be included	117.07
193	c.12.e)(4)b.v	P007	FCCU	Quarterly EER required for NOx CEM requires "the total NOx emissions for	50.56
103	C. 12.6)(4)D.V	1 007	1 000	the calendar quarter (tons)" to be included	30.30
185	c.40.e)(5)b.v	P003/P004	East/West Flare	Quarterly EER required for H2S CEM requires "the total hydrogen sulfide	0.01
400	C.40.6)(3)D.V	F 003/F 004	Last/ West 1 late	emissions for the calendar quarter (tons)" to be included	0.01
497	c.40.e)(6)b.v	P003/P004	East/West Flare	Quarterly EER required for Total Sulfur CEM requires "the total sulfur	0.66
407	c.40.6/(0)b.v	F 003/F004	Lasi/vvest Flate	emissions for the calendar quarter (tons)" to be included	0.00

If you have any questions concerning this report, please contact Joan Anderson (joan.anderson@bp.com or 567-698-4405), or Hannah Placzek (Hannah.placzek@bp.com).

Based on information and belief formed after reasonable inquiry, the statements and information in this report are true, accurate, and complete.

Sincerely,

Des Gillen
90F20640AD13450...

Des Gillen

President - BP-Husky Refining LLC

Attachment A – CMS Summary Report Attachment B – Data Assessment Report

Attachment A – CMS Summary Report

To:

October 1, 2021

From: July 1, 2021

	GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE
Pollutant: H ₂ S	

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 8/31/2021

Reporting Period Dates:

Process Unit(s) Description: Crude 1 Furnace (0448020007B015)

Total Source Operating Time in Reporting Period²: 2,208 hr

Emission Data Summary		CMS Perfomance Summary	
. Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	15	c. Quality assurance calibration	1
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
. Total duration of excess emissions	15	2. Total CMS Downtime	1
. Total duration of excess emissions x (100) /	0.68	3. [Total CMS Downtime] x (100) / [Total source	0.05
[Total source operating time] % ³ 2 Record all times in hours.	0.00	operating time] % ³	0.03

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
	DocuSigned by:
Signature:	Des Gillen
Į.	President - BP-Husky Refining LLC
Date:	

¹ Form described in 40 CFR 60.7 (d)

Pol	lutant:	HaS

Reporting Period Dates: From: July 1, 2021 To: October 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 8/31/2021

Process Unit(s) Description: Coker 2 Furnace (0448020007B017)

Total Source Operating Time in Reporting Period²: 1,994 hr

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	15	c. Quality assurance calibration	1
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	15	2. Total CMS Downtime	1
3. Total duration of excess emissions x (100) /	0.75	3. [Total CMS Downtime] x (100) / [Total source	0.05
[Total source operating time] % ³	0.73	operating time] % ³	0.00
2 Record all times in hours.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
Signature:	DocuSigned by:
Title:	Des Gillen President of BP-Husky Refining LLC
Date:	

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H₂S

Reporting Period Dates: From: July 1, 2021 To: October 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 8/31/2021

Process Unit(s) Description: Crude Vac 2 Furnace (0448020007B019)

Total Source Operating Time in Reporting Period²: 2,024 hr

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	15	c. Quality assurance calibration	1
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	15	2. Total CMS Downtime	1
3. Total duration of excess emissions x (100) /	0.74	3. [Total CMS Downtime] x (100) / [Total source	0.05
[Total source operating time] % ³	0.74	operating time] % ³	0.03
2 Record all times in hours.			

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
Signature: (DocuSigned by:
	Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	

¹ Form described in 40 CFR 60.7 (d)

Reporting Period Dates: From: July 1, 2021 To: October 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 8/31/2021

Pollutant: H₂S

Process Unit(s) Description: Naphtha Treater Furnace (0448020007B022)

Total Source Operating Time in Reporting Period²: 2,208 hr

Emission Data Summary	CMS Perfomance Summary				
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:			
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0		
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0		
c. Process Problems	15	c. Quality assurance calibration	1		
d. Other known causes	0	d. Other known causes	0		
e. Unknown causes	0	e. Unknown causes	0		
2. Total duration of excess emissions	15	2. Total CMS Downtime	1		
3. Total duration of excess emissions x (100) /	0.68	3. [Total CMS Downtime] x (100) / [Total source	0.05		
[Total source operating time] % ³		operating time] % ³	0.05		
2 Record all times in hours.					

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
Signature:	DocuSigned by: Des Gilles
Title:	President Be-Husky Refining LLC
Date:	

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H ₂ S							
Reporting Period Dates:	From: <u>J</u>	uly 1, 20	<u>21</u>	To:	October 1, 2021		
Company:	BP-Husky	Refining	LLC				
Emission Limitation:	0.10 gr H ₂	S/dscf fu	ıel gas o	on a 3-hr rol	ling average		
Address:	4001 Ced	ar Point [Road, C	regon, Ohio	<u> 43616</u>		
Monitor Manufacturer and Model No.:	Siemens I	Maxum II	, SN: 00	09300			
Date of Latest CMS Certification or Audit:	8/31/2021						
Process Unit(s) Description:	DHT A-Tra	ain Furna	ace (04	48020007B	029)		
Total Source Operating Time in Reporting Period	d ² :	2,20	8 hr	natural g	gas was combusted for 2,208 ho gas was combusted for 0 hours for ours this quarter)		
Emission Data Summary			CMS F	Perfomance	Summary		
1. Duration of excess emissions in reporting period	due to:		1. CM	S downtime	in reporting period due to:		
a. Start-up/Shutdown:		0	a.	Monitor eq	uipment malfunctions	0	
b. Control equipment problems		0	b.	Non-monit	or equipment malfunctions	0	
c. Process Problems		15	C.	c. Quality assurance calibration			
d. Other known causes		0	d.	vn causes	0		
e. Unknown causes		0	e.	0			
Total duration of excess emissions		15	2. Tota	1			
 Total duration of excess emissions x (100) / [Total source operating time] %³ 		0.68	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³				
2 Record all times in hours.						-	
					erating time or the total CMS downtime is ess emission report shall be submitted.	5 percent o	
Describe any changes since last quarter in CMS, Not applicable - no changes from previous quarte	er.						
I certify that the information contained in this rep	port is true,	accurate	e, and d	complete.			
Name: Des Gillen			_				
Signature: Des Gillen			_				
Title: President - BP-Husky Refining LLC							

¹ Form described in 40 CFR 60.7 (d)

$\label{eq:figure 1-SUMMARY REPORT} \textbf{GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE}^1$

Pollutant: H ₂ S						
Reporting Period Dates:	From:	July 1, 202	<u>21</u>	To:	October 1, 2021	
Company:	BP-Husky	y Refining	<u>LLC</u>			
Emission Limitation:	0.10 gr H	₂ S/dscf fu	el gas	on a 3-hr roll	ling average	
Address:	4001 Cec	dar Point F	Road,	Oregon, Ohio	<u> 43616</u>	
Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300						
Date of Latest CMS Certification or Audit: 8/31/2021						
Process Unit(s) Description:	BGOT Fu	urnace (04	14802	0007B030)		
Total Source Operating Time in Reporting Period ⁱ	² :	2,00	<u>1 hr</u>	natural g	gas was combusted for 2,001 hours for urs this quarter)	
Emission Data Summary				Perfomance	•	
Duration of excess emissions in reporting period of the control of the contr	due to:	-			in reporting period due to:	
a. Start-up/Shutdown:		0	a.	<u> </u>	uipment malfunctions	0
b. Control equipment problems	-	0	b.		or equipment malfunctions	0
c. Process Problems		15	C.		surance calibration	1
d. Other known causes		0	d.	Other knov		0
e. Unknown causes		0	e.	Unknown		0
Total duration of excess emissions		15		tal CMS Dow		1
 Total duration of excess emissions x (100) / [Total source operating time] %³ 		0.75	_	otal CMS Dov erating time]	vntime] x (100) / [Total source % ³	0.05
i oi alo roporang porioa.		•	_	•	erating time or the total CMS downtime is ess emission report shall be submitted.	5 percent c
Describe any changes since last quarter in CMS, Not applicable - no changes from previous quarte I certify that the information contained in this report Name: Des Gillen Docussigned by: Des Gillen	r.			complete.		
Title: President - BP-Husky Refining LLC						

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H ₂ S			

Reporting Period Dates: From: July 1, 2021 To: October 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 8/31/2021

Process Unit(s) Description: <u>Vac 1 Furnace (0448020007B031)</u>

Total Source Operating Time in Reporting Period²: 2,208 hr

Emission Data Summary	CMS Perfomance Summary			
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:		
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0	
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0	
c. Process Problems	15	c. Quality assurance calibration	1	
d. Other known causes	0	d. Other known causes	0	
e. Unknown causes	0	e. Unknown causes	0	
2. Total duration of excess emissions	15	2. Total CMS Downtime	1	
Total duration of excess emissions x (100) / [Total source operating time] % ³ 2 Record all times in hours. 2 Record all times in hours.	0.68	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.05	
³ For the reporting period: If the total duration of excess emissions is		r greater of the total operating time or the total CMS downtime is eport form and the excess emission report shall be submitted.	5 percent of	

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
	DocuSigned by:
Signature:	Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	

¹ Form described in 40 CFR 60.7 (d)

Pollutant: ⊢	H ₂ S									
Reporting P	eriod Dates:	From:	n: July 1, 2021 To: October 1, 2021							
Company:		BP-Husl	BP-Husky Refining LLC							
Emission Li	mitation:	<u>0.10 gr l</u>	H₂S/dscf fu	ıel gas	on a 3-hr ro	lling average				
Address:		4001 Ce	dar Point	Road, C	<u> Dregon, Ohi</u>	<u>o 43616</u>				
Monitor Mar	nufacturer and Model No.:	Siemens	Maxum I	, SN: 0	09300					
Date of Late	st CMS Certification or Audit:	8/31/202	21							
Process Uni	t(s) Description:	Coker 3	Furnace (<u>)44802</u>	0007B032)					
Total Source	e Operating Time in Reporting Perio	od²:	2,12	2 hr	_					
Emission Da	ata Summary			CMS F	Perfomanc	e Summary				
Duration of excess emissions in reporting period due to:				1. CM	S downtime	e in reporting period due to:				
a. Start-up/Shutdown:			0	a. Monitor equipment malfunctions						
b. Contr	ol equipment problems		0	b. Non-monitor equipment malfunctions						
c. Proce	ess Problems		15	C.	1					
d. Other	known causes		0	d.	0					
e. Unkn	own causes		0	e. Unknown causes						
2. Total dura	ation of excess emissions		15	2. Tota	1					
 Total duration of excess emissions x (100) / [Total source operating time] %³ 			0.71	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³						
³ For the re	porting period: If the total duration of exces		•	•		perating time or the total CMS downtime is cess emission report shall be submitted.	5 percent of			
Not applicabl	y changes since last quarter in CMS e - no changes from previous quarter. the information contained in this re				complete.					
Name:	Des Gillen									
	DocuSigned by:			=						
Signature:	Des Gillen			-						

Title:

Date:

President^{AD} B¹⁵⁰Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H ₂ S						
Reporting Period Dates:	From:	July 1, 202	71 To: October 1, 2021			
Company:	BP-Husl	ky Refining	LLC			
Emission Limitation:	<u>0.10 gr l</u>	H₂S/dscf fu	el gas on a 3-hr rolling average			
Address:	4001 Ce	edar Point F	Road, Oregon, Ohio 43616			
Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300						
Date of Latest CMS Certification or Audit:	8/31/202					
Process Unit(s) Description:	East BG	OT Furnac	e (0448020007B033)			
Total Source Operating Time in Reporting Perio	_	1,99	,			
Emission Data Summary			CMS Perfomance Summary			
1. Duration of excess emissions in reporting period	d due to:		CMS downtime in reporting period due to:			
a. Start-up/Shutdown:		0	a. Monitor equipment malfunctions	0		
b. Control equipment problems		0	b. Non-monitor equipment malfunctions	0		
c. Process Problems		15	c. Quality assurance calibration	1		
d. Other known causes		0	d. Other known causes	0		
e. Unknown causes		0	e. Unknown causes	0		
2. Total duration of excess emissions		15	Total CMS Downtime	1		
3. Total duration of excess emissions x (100) / [Total source operating time] % ³			0.75 3. [Total CMS Downtime] x (100) / [Total source operating time] % ³			
			greater of the total operating time or the total CMS downtime is sport form and the excess emission report shall be submitted.	5 percent of		
Describe any changes since last quarter in CMS Not applicable - no changes from previous quarter. I certify that the information contained in this re						
Name: Des Gillen						
Signature: Des Gillen						
Title: President - BP-Husky Refining LLC						

¹ Form described in 40 CFR 60.7 (d)

					•			
Pollutant: H ₂ S								
Reporting Period Dates:	From:	rom: July 1, 2021 To: October 1, 2021						
Company:	BP-Husl	ky Refining	LLC					
Emission Limitation:	0.10 gr l	H₂S/dscf fu	el gas c	n a 3-hr rolli	ing average			
Address:	4001 Ce	dar Point I	Road. O	reaon. Ohio	43616			
Monitor Manufacturer and Model No.:		Cedar Point Road, Oregon, Ohio 43616 ens Maxum II, SN: 009300						
Date of Latest CMS Certification or Audit:	8/31/202							
Process Unit(s) Description:	-		(04480:	20007B034)				
Source Operating Time in Reporting Period ² :			8 hr	(TIU fuel gas was	gas was combusted for 0 hours combusted for 2,208 hours for a urs this quarter)			
Emission Data Summary			CMS P	erfomance	Summary			
1. Duration of excess emissions in reporting period	due to:		1. CMS	3 downtime	in reporting period due to:			
a. Start-up/Shutdown:		0	a.	Monitor equ	uipment malfunctions	0		
b. Control equipment problems		0	b.	Non-monito	or equipment malfunctions	0		
c. Process Problems		0	C.	Quality ass	us	0		
d. Other known causes		0	d.	Other know	n causes	0		
e. Unknown causes		0	e.	Unknown c	auses	0		
2. Total duration of excess emissions		0		I CMS Dow		0		
 Total duration of excess emissions x (100) / [Total source operating time] %³ 		0.00		rating time] ⁽	vntime] x (100) / [Total source	0.00		
³ For the reporting period: If the total duration of excess					rating time or the total CMS downtime ss emission report shall be submitted			
Describe any changes since last quarter in CMS The East Alstom Boiler combusted only natural gas I certify that the information contained in this re Name: Des Gillen Docusigned by: Des Gillen Signature: Des Gillen Poccusigned by: Des Gillen	this quarte	r.		omplete.				
Title: President - BP-Husky Refining LLC								

¹ Form described in 40 CFR 60.7 (d)

From:	July 1, 202	<u>21</u> To :	October 1, 2021			
ppany: BP-Husky Refining LLC						
0.10 gr H	l₂S/dscf fu	el gas on a 3-hr roll	ing average			
4001 Ced	dar Point F	Road, Oregon, Ohio	43616			
Siemens	Maxum II,	SN: 009300				
8/31/202	1					
West Alston Boiler (0448020007B035)						
?:	2,208	natural gas	was combusted for 0 hours for a			
		CMS Perfomance	Summary	_		
lue to:		1. CMS downtime	in reporting period due to:			
	0	a. Monitor eq	uipment malfunctions	0		
	0	b. Non-monito	or equipment malfunctions	0		
	15	c. Quality ass	urance calibration	1		
	0	d. Other know	vn causes	0		
	0	_		0		
	15			1		
	0.00	operating time] % ³				
<u>'</u>						
me, both the	summary re	eport form and the exce	· ·	s 5 percent of		
m fuel gas	this quarte	er.				
2 r	BP-Husk 0.10 gr H 4001 Cer Siemens 8/31/202 West Als : ue to: missions is ne, both the process, on fuel gas	BP-Husky Refining 0.10 gr H ₂ S/dscf fu 4001 Cedar Point F Siemens Maxum III. 8/31/2021 West Alstom Boiler 2,208 ue to: 0 0 15 0 0 15 0.00 missions is 1 percent or ne, both the summary references, or control on fuel gas this quart	BP-Husky Refining LLC 0.10 gr H ₂ S/dscf fuel gas on a 3-hr roll 4001 Cedar Point Road, Oregon, Ohio Siemens Maxum II, SN: 009300 8/31/2021 West Alstom Boiler (0448020007B035 : 2,208 hr (TIU fuel ganatural gas 2,208 hour CMS Perfomance ue to: 1. CMS downtime 0 a. Monitor eq 0 b. Non-monitor 15 c. Quality ass 0 d. Other know 0 e. Unknown of 15 2. Total CMS Dow 0.00 operating time]	BP-Husky Refining LLC 0.10 gr H ₂ S/dscf fuel gas on a 3-hr rolling average 4001 Cedar Point Road, Oregon, Ohio 43616 Siemens Maxum II, SN: 009300 8/31/2021 West Alstom Boiler (0448020007B035) 2,208 hr (TIU fuel gas was combusted for 2,208 hour natural gas was combusted for 0 hours for a 2,208 hours this quarter) CMS Perfomance Summary ue to: 1. CMS downtime in reporting period due to: 0. a. Monitor equipment malfunctions 1. b. Non-monitor equipment malfunctions 1. c. Quality assurance calibration 0. d. Other known causes 0. e. Unknown causes 1. c. Total CMS Downtime 3. [Total CMS Downtime] x (100) / [Total source operating time] % ³ missions is 1 percent or greater of the total operating time or the total CMS downtime in the, both the summary report form and the excess emission report shall be submitted.		

¹ Form described in 40 CFR 60.7 (d)

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Reporting Period Dates: From: July 1, 2021 To: October 1, 2021

Company: <u>BP-Husky Refining LLC</u>

Emission Limitation: 0.10 gr H₂S/dscf fuel gas on a 3-hr rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit: 8/31/2021

Pollutant: H₂S

Process Unit(s) Description: FCC/CO Boiler (0448020007P007)

Total Source Operating Time in Reporting Period²: 2,208 hr

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	15	c. Quality assurance calibration	1
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
Total duration of excess emissions	15	2. Total CMS Downtime	1
Total duration of excess emissions x (100) / [Total source operating time] % ³		3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.05
		or greater of the total operating time or the total CMS downtime is	5 percent of

greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Not applicable - no changes from previous quarter.

Des Gillen
DocuSigned by:
DocuSigned by: Des Gilles
90F20640AD13450
President - BP-Husky Refining LLC

Describe any changes since last quarter in CMS, process, or controls.

¹ Form described in 40 CFR 60.7 (d)

BP-HUSKY REFINING LLC - TIU MIX DRUM H2S CMS REPORT FOR 3RD QUARTER 2021 Reporting Requirement WAS DEVIATION MALFUNCTION VERBAL MALFUNCTION WRITTEN INFORMATION (choose one or both) ACTUAL METHOD CORRECTIVE ACTIONS ATTRIBUTABLE TO A REPORT DATE REPORT DATE USED TO PROBABLE CAUSE FOR DEVIATION DURATION EMISSIONS UNIT ID/Description PREVENTATIVE MALFUNCTION? (Yes or No If no reports were made, state (If no reports were made, state DETERMINE DESCRIPTION AND THE DEVIATION "NO REPORTS" in the space "NO REPORTS" in the space MEASURES TAKEN If Yes, continue to the next Quarterly Semi-Annual COMPLIANCE MAGNITUDE Date / Time Date / Time column) below) below) OF THE DEVIATION Start End B015 - Crude 1 Furnace; B019 - Crude 2 Furnace; B022 - Naphtha Treater Furnace; B029 - DHT A - Train Furnace Recalibrated and B030 - DHT B - Train Furnace; Continuous CEMS Downtime for 1 Hour. 8/6/2021 10:00 8/6/2021 11:00 N/A CGA test completed Returned Analyzer to N/A Yes No Nο B031 - Vac 1 Furnace; Monitoring System service. B032 - Coker 3 Furnace B033 - East BGOT Furnace: B035 - West Alstom Boiler; P007- FCC/CO Boiler B015 - Crude 1 Furnace; B019 - Crude 2 Furnace; EPA Amine control valve B022 - Naphtha Treater Furnace; (PCV 3405B) failed open B029 - DHT A - Train Furnace Coker feed rates were to the West Hydrocarbon B030 - DHT B - Train Furnace; Continuous CFMS excess emissions for 6 reduced, antifoam was No 7/28/2021 18:00 7/29/2021 Flare. This failure resulted 7/29/2021 7/29/2021 B031 - Vac 1 Furnace; Monitoring Systen injected and flares were hours in the acid gas stream to B032 - Coker 3 Furnace separated . enter the hydrocarbon B033 - East BGOT Furnace; flare system. B035 - West Alstom Boiler; P007- FCC/CO Boiler B015 - Crude 1 Furnace: B019 - Crude 2 Furnace; B022 - Naphtha Treater Furnace; the East Flare Gas ADCON engineers were B029 - DHT A - Train Furnace recovery compressors immediately notified and B030 - DHT B - Train Furnace: Continuous CEMS excess emissions for 5 tripped off due to loss of were able to restart the 8/10/2021 18:00 8/10/2021 23:00 8/10/2021 8/18/2021 B031 - Vac 1 Furnace; the PLC sending excess PLC and both Monitoring Syster hours B032 - Coker 3 Furnace material to the Bulk Amine compressors were brough B033 - East BGOT Furnace; Contactor. online. B035 - West Alstom Boiler; P007- FCC/CO Boiler B015 - Crude 1 Furnace: B019 - Crude 2 Furnace: B022 - Naphtha Treater Furnace The bulk amine contactor B029 - DHT A - Train Furnace was operating at high B030 - DHT B - Train Furnace: Continuous CEMS excess emissions for ates when a large amour Coker feed rates were No 8/19/2021 16:00 8/19/2021 20:00 N/A N/A Yes B031 - Vac 1 Furnace: Monitoring System of material was released reduced. B032 - Coker 3 Furnace to the West flare gas B033 - Fast BGOT Furnace recovery system. B035 - West Alstom Boiler: P007- FCC/CO Boiler

From: <u>July 1, 2021</u>

To:

operating time] %3

If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of

October 1, 2021

Company:	BP-Husl	ky Refining L	<u>LC</u>	
Emission Limitation:	34.53 to	ns SO2 per r	olling 12-month period	
Address:	4001 Ce	dar Point Ro	ad, Oregon, Ohio 43616	
Monitor Manufacturer and Model No.:	Thermo	Scientific SC	LA II, SN: SL-09030713	
Date of Latest CMS Certification or Audit:	9/1/2021	<u> </u>		
Process Unit(s) Description:	Crude 1	Furnace (04	.48020007B015)	
Total Source Operating Time in Reporting Period ² :		2,208	hr_	
Emission Data Summary			CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:			CMS downtime in reporting period due to:	
a. Start-up/Shutdown:		0	a. Monitor equipment malfunctions	0
b. Control equipment problems		0	b. Non-monitor equipment malfunctions	0
c. Process Problems		0	c. Quality assurance calibration	0
d. Other known causes		0	d. Other known causes	6
e. Unknown causes		0	e. Unknown causes	0
Total duration of excess emissions		0	2. Total CMS Downtime	6
3. Total duration of excess emissions x (100) /		0	3. [Total CMS Downtime] x (100) / [Total source	0.27

the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

[Total source operating time] %3

2 Record all times in hours.

³ For the reporting period:

Pollutant: Total Sulfur Reporting Period Dates:

Name:	Des Gillen
Signature:	DocuSigned by: Des Gillen
Title:	President এABP4Flusky Refining LLC
Date:	

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur

Reporting Period Dates: From: July 1, 2021 To: October 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation:21.02 tons SO2 per rolling 12-month periodAddress:4001 Cedar Point Road, Oregon, Ohio 43616Monitor Manufacturer and Model No.:Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 9/1/2021

Process Unit(s) Description: <u>Crude Vac 2 Furnace (0448020007B019)</u>

Total Source Operating Time in Reporting Period²: 2,024 hr

Emission Data Summary		CMS Perfomance Summary	
Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	6
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CMS Downtime	6
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	0.30
[Total source operating time] % ³		operating time] % ³	0.30

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
Signature:	DocuSigned by:
T:41	Des Gillen
Title:	Presidem Bro Husky Refining LLC
Date:	

¹ Form described in 40 CFR 60.7 (d)

From: <u>July 1, 2021</u>

To:

operating time] %3

If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of

October 1, 2021

Company:	BP-Husl	ky Refining L	<u>LC</u>	
Emission Limitation:	6.45 ton	s SO2 per ro	lling 12-month period	
Address:	4001 Ce	dar Point Ro	ad, Oregon, Ohio 43616	
Monitor Manufacturer and Model No.:	Thermo	Scientific SC	LA II, SN: SL-09030713	
Date of Latest CMS Certification or Audit:	9/1/202	<u> </u>		
Process Unit(s) Description:	Naphtha	Treater Furr	nace (0448020007B022)	
Total Source Operating Time in Reporting Period ² :		2,208	hr_	
Emission Data Summary			CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to:			CMS downtime in reporting period due to:	
a. Start-up/Shutdown:		0	a. Monitor equipment malfunctions	0
b. Control equipment problems		0	b. Non-monitor equipment malfunctions	0
c. Process Problems		0	c. Quality assurance calibration	0
d. Other known causes		0	d. Other known causes	6
e. Unknown causes		0	e. Unknown causes	0
2. Total duration of excess emissions		0	2. Total CMS Downtime	6
3. Total duration of excess emissions x (100) /		_	3. [Total CMS Downtime] x (100) / [Total source	

0

the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

[Total source operating time] %3

2 Record all times in hours.

³ For the reporting period:

Pollutant: Total Sulfur
Reporting Period Dates:

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
	DocuSigned by:
Signature:	— Des Gillen
Title:	Presteent AP ਜਿਸ ਸਿੰਘsky Refining LLC
Date:	

0.27

¹ Form described in 40 CFR 60.7 (d)

From: <u>July 1, 2021</u>

BP-Husky Refining LLC

2.32 tons SO2 per rolling 12-month period

To:

October 1, 2021

Address:	4001 Cedar Point Ro	ad, Oregon, Ohio 43616	
Monitor Manufacturer and Model No.:	Thermo Scientific SC	DLA II, SN: SL-09030713	
Date of Latest CMS Certification or Audit:	9/1/2021		
Process Unit(s) Description:	DHT A-Train Furnace	e (0448020007B029)	
Total Source Operating Time in Reporting Period ² :	2,208	(TIU fuel gas was combusted for 2,208 hour natural gas was combusted for 0 hours for a 2,208 hours this quarter)	
Emission Data Summary		CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	6
e. Unknown causes	0	e. Unknown causes	0
Total duration of excess emissions	0	2. Total CMS Downtime	6
Total duration of excess emissions x (100) / [Total source operating time] % ³	0	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.27
		of the total operating time or the total CMS downtime is 5 percent excess emission report shall be submitted.	of greater of

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
Signature:	DocuSigned by: Des Gillen
Title:	President ADB Ps Husky Refining LLC
Date:	

Pollutant: Total Sulfur
Reporting Period Dates:

Emission Limitation:

Company:

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur				
Reporting Period Dates:	From: July 1, 2021 To: October 1, 2021			
Company:	BP-Husky Refining LLC			
Emission Limitation:	3.86 tons SO2 per rolling 12-month period			
Address:	4001 Cedar Point Road, Oregon, Ohio 43616			
Monitor Manufacturer and Model No.:	Thermo Scientific SOLA II, SN: SL-09030713			
Date of Latest CMS Certification or Audit:	9/1/2021			
Process Unit(s) Description:	BGOT Furnace (0448020007B030)			
Total Source Operating Time in Reporting Period ² :				
Emission Data Summary	CMS Perfomance Summary			
Duration of excess emissions in reporting period due to:	1. CMS downtime in reporting period due to:			
a. Start-up/Shutdown:	0 a. Monitor equipment malfunctions 0			
b. Control equipment problems	0 b. Non-monitor equipment malfunctions 0			
c. Process Problems	0 c. Quality assurance calibration 0			
d. Other known causes	0 d. Other known causes 6			
e. Unknown causes	0 e. Unknown causes 0			
Total duration of excess emissions	0 2. Total CMS Downtime 6			
Total duration of excess emissions x (100) / [Total source operating time] % ³ [Total source operating time] % ³	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³			
² Record all times in hours. ³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time or the total cMS downtime is 5 percent of greater of the total operating time or the total be submitted.				
Describe any changes since last quarter in CMS, process Not applicable - no changes from previous quarter. I certify that the information contained in this report is tr				
Name: Des Gillen				
Signature: Des Gillen				
Title: President ABPH usky Refining LLC				

¹ Form described in 40 CFR 60.7 (d)

Reporting Period Dates:	From: <u>July 1, 2021</u>	To:	October 1, 2021
Company:	BP-Husky Refining LLC		
Emission Limitation:	11.62 tons SO2 per rolling 12-mor	nth perio	<u>od</u>
Address:	4001 Cedar Point Road, Oregon,	Ohio 43	<u>616</u>
Monitor Manufacturer and Model No.:	Thermo Scientific SOLA II, SN: SI	09030	<u>713</u>
Date of Latest CMS Certification or Audit:	9/1/2021		

Pollutant: Total Sulfur

Process Unit(s) Description: Vac 1 Furnace (0448020007B031)

Total Source Operating Time in Reporting Period²: 2,208 hr

•		CMS Perfomance Summary		
0	a. Monitor equipment malfunctions	0		
0	b. Non-monitor equipment malfunctions	0		
0	c. Quality assurance calibration	0		
0	d. Other known causes	6		
0	e. Unknown causes	0		
0	2. Total CMS Downtime	6		
0	3. [Total CMS Downtime] x (100) / [Total source	0.27		
	operating time] % ³	0.27		
	0 0 0	1. CMS downtime in reporting period due to: 0 a. Monitor equipment malfunctions 0 b. Non-monitor equipment malfunctions 0 c. Quality assurance calibration 0 d. Other known causes 0 e. Unknown causes 0 2. Total CMS Downtime 3. [Total CMS Downtime] x (100) / [Total source		

If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted. ³ For the reporting period:

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
Signature:	DocuSigned by: Des Gillen
Title:	Presidefft ^A ਬੈੱ ^B Husky Refining LLC
Date:	

¹ Form described in 40 CFR 60.7 (d)

Reporting Period Dates:	From: <u>July 1, 2021</u>	To:	October 1, 2021
Company:	BP-Husky Refining LLC		
Emission Limitation:	20.46 tons SO2 per rolling 12-mor	nth perio	<u>d</u>

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 9/1/2021

Pollutant: Total Sulfur

Process Unit(s) Description: Coker 3 Furnace (0448020007B032)

Total Source Operating Time in Reporting Period²: 2,122 hr

•		CMS Perfomance Summary		
		1. CMS downtime in reporting period due to:		
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0	
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0	
c. Process Problems	0	c. Quality assurance calibration	0	
d. Other known causes	0	d. Other known causes	6	
e. Unknown causes	0	e. Unknown causes	0	
Total duration of excess emissions	0	2. Total CMS Downtime	6	
3. Total duration of excess emissions x (100) /	0	3. [Total CMS Downtime] x (100) / [Total source	0.28	
[Total source operating time] % ³		operating time] % ³	0.20	

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

Name:	Des Gillen
	DocuSigned by:
Signature:	Des Gillen
Title:	90F20640AD13450 President - BP-Husky Refining LLC
Date:	

¹ Form described in 40 CFR 60.7 (d)

From: <u>July 1, 2021</u>

BP-Husky Refining LLC

To:

October 1, 2021

Emission Limitation:	Emission Limitation: 3.86 tons SO2 per rolling 12-month period				
Address: 4001 Cedar Point Road, Oregon, Ohio 43616					
Monitor Manufacturer and Model No.: Thermo Scientific SOLA II, SN: SL-09030713					
Date of Latest CMS Certification or Audit: 9/1/2021					
Process Unit(s) Description:	East BG	OT Furnace	(0448020007B033)		
Total Source Operating Time in Reporting Period ² :		1,999	hr_		
Emission Data Summary			CMS Perfomance Summary		
1. Duration of excess emissions in reporting period due to:			CMS downtime in reporting period due to:		
a. Start-up/Shutdown:		0	a. Monitor equipment malfunctions	0	
b. Control equipment problems		0	b. Non-monitor equipment malfunctions	0	
c. Process Problems		0	c. Quality assurance calibration	0	
d. Other known causes		0	d. Other known causes	6	
e. Unknown causes		0	e. Unknown causes	0	
2. Total duration of excess emissions		0	2. Total CMS Downtime	6	
3. Total duration of excess emissions x (100) /		0	3. [Total CMS Downtime] x (100) / [Total source	0.30	
[Total source operating time] % ³			operating time] % ³		

the total operating time, both the summary report form and the excess emission report shall be submitted.

If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of

Describe any changes since last quarter in CMS, process, or controls.

Not applicable - no changes from previous quarter.

³ For the reporting period:

Pollutant: Total Sulfur
Reporting Period Dates:

Company:

Name:	Des Gillen
Signature:	— DocuSigned by: Des Gillen
Title:	President 185 Husky Refining LLC
Date:	

¹ Form described in 40 CFR 60.7 (d)

Pollutant: Total Sulfur				
Reporting Period Dates:	From:	July 1, 2021	To: October 1, 2021	
Company:	BP-Hus	ky Refining LI	<u>.c</u>	
Emission Limitation:	3.86 ton	s SO2 per rol	ling 12-month period	
Address:	4001 Ce	edar Point Ro	ad, Oregon, Ohio 43616	
Monitor Manufacturer and Model No.:	Thermo	Scientific SO	LA II, SN: SL-09030713	
Date of Latest CMS Certification or Audit:	9/1/202	1		
Process Unit(s) Description:	East Als	stom Boiler (0		35)
Source Operating Time in Reporting Period ² :		2,208	hr (TIU fuel gas was combusted for 2,208 hours in least one of the Alstom Boilers for the quarter. It gas was combusted for 0 hours in both Alstom for the quarter.)	Natural
Emission Data Summary			CMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to:			CMS downtime in reporting period due to:	
a. Start-up/Shutdown:		0	a. Monitor equipment malfunctions	0
b. Control equipment problems		0	b. Non-monitor equipment malfunctions	0
c. Process Problems		0	c. Quality assus	0
d. Other known causes		0	d. Other known causes	6
e. Unknown causes		0	e. Unknown causes	0
2. Total duration of excess emissions		0	2. Total CMS Downtime	6
 Total duration of excess emissions x (100) / [Total source operating time] %³ 		0	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.27
			f the total operating time or the total CMS downtime is 5 percent of gracess emission report shall be submitted.	eater of
Describe any changes since last quarter in CMS, process The East Alstom Boiler combusted only natural gas this quarter. I certify that the information contained in this report is true. Des Gillen Des Gillen Docusigned by: Des Gillen Title: Pressage MABPS Husky Refining LLC	er and th	ne West Alsto		

¹ Form described in 40 CFR 60.7 (d)

BP-HUSKY REFINING LLC - TIU MIX DRUM TS CMS REPORT FOR 3RD QUARTER 2021 DEVIATION INFORMATION Reporting Requirement WAS DEVIATION MALFUNCTION VERBAL MALFUNCTION WRITTEN ACTUAL METHOD CORRECTIVE ACTIONS / ATTRIBUTABLE TO A REPORT DATE REPORT DATE USED TO PROBABLE CAUSE FOR THE DEVIATION DURATION EMISSIONS UNIT ID/Description PREVENTATIVE MEASURES DESCRIPTION AND MAGNITUDE OF THE DEVIATION MALFUNCTION? (Yes or No DETERMINE DEVIATION TAKEN If Yes, continue to the next "NO REPORTS" in the space "NO REPORTS" in the space Quarterly Semi-Annua COMPLIANCE Date / Time Date / Time column) below) below) B015 - Crude 1 Furnace; B022 - Naphtha Treater Furnace; B029 - DHT A - Train Furnace B030 - DHT B - Train Furnace: Recalibrated and Returned Continuous CEMS Downtime for 4 7/19/2021 14:00 B031 - Vac 1 Furnace; 7/19/2021 10:00 N/A N/A Yes No Semi-annual PM No Monitoring System Analyzer to service. B032 - Coker 3 Furnace B033 - East BGOT Furnace; B034/B035 - East and West Alstom Boilers; P007- FCC/CO Boiler B015 - Crude 1 Furnace; B022 - Naphtha Treater Furnace; B029 - DHT A - Train Furnace B030 - DHT B - Train Furnace; Continuous CEMS Downtime for 2 Recalibrated and Returned B031 - Vac 1 Furnace; Yes No 7/19/2021 15:00 7/19/2021 17:00 Semi-annual PM No N/A N/A Monitoring System Analyzer to service. B032 - Coker 3 Furnace B033 - East BGOT Furnace; B034/B035 - East and West Alstom Boilers: P007- FCC/CO Boiler

Pollutant: H ₂ S					
Reporting Period Dates:	From:	July 1, 2021		To: October 1, 2021	
Company:	BP-Husl	ky Refining LL	<u>C</u>		
Emission Limitation:	<u>0.10 gr l</u>	H₂S/dscf fuel g	jas	on a 3-hr rolling average	
Address:	4001 Ce	edar Point Roa	ıd, (<u> Dregon, Ohio 43616</u>	
Monitor Manufacturer and Model No.:				0028039490020	
Date of Latest CMS Certification or Audit:	8/31/202	21			
Process Unit(s) Description:	Iso 2 Fee	ed Heater (044	802	0007B008)	
Total Source Operating Time in Reporting P	eriod ² :	2,208		hr	
Emission Data Summary			CN	IS Perfomance Summary	
1. Duration of excess emissions in reporting p	eriod due t	0:	1.	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:		0		a. Monitor equipment malfunctions	0
b. Control equipment problems		0		b. Non-monitor equipment malfunctions	0
c. Process Problems		0		c. Quality assurance calibration	0
d. Other known causes		0		d. Other known causes	0
e. Unknown causes		0		e. Unknown causes	0
Total duration of excess emissions		0	2.	Total CMS Downtime	0
 Total duration of excess emissions x (100) / [Total source operating time] %³ 		0.00	3.	[Total CMS Downtime] x (100) / [Total source operating time] $\%^3$	0.00
. c. a.c.operang peneda		•	_	reater of the total operating time or the total CMS downtime report form and the excess emission report shall be submitt	•
Describe any changes since last quarter in O Not applicable - no changes from previous of I certify that the information contained in thi	quarter.				
Name: Des Gillen DocuSigned by:			-		
Signature: Des Gillen 90F20640AD13450			-		
Title: President - BP-Husky Refining LI	_C				

Title:

¹ Form described in 40 CFR 60.7 (d)

Pollutant: H ₂ S					
Reporting Period Dates:	From:	July 1, 2021		To : October 1, 2021	
Company:	BP-Hus	ky Refining LL	<u>C</u>		
Emission Limitation:	0.10 gr l	H₂S/dscf fuel o	jas	on a 3-hr rolling average	
Address:	4001 Ce	edar Point Roa	d, (Oregon, Ohio 43616	
Monitor Manufacturer and Model No.:				002803949002 <u>0</u>	
Date of Latest CMS Certification or Audit:	8/31/202				
Process Unit(s) Description:	Iso 2 Sta	bilizer Reboiler	(04	48020007B009)	
Total Source Operating Time in Reporting Pe	_	2,208		hr	
Emission Data Summary		<u> </u>	CN	S Perfomance Summary	
1. Duration of excess emissions in reporting pe	eriod due t	:o:	1.	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:		0		a. Monitor equipment malfunctions	0
b. Control equipment problems		0		b. Non-monitor equipment malfunctions	0
c. Process Problems		0		c. Quality assurance calibration	0
d. Other known causes		0		d. Other known causes	0
e. Unknown causes		0		e. Unknown causes	0
2. Total duration of excess emissions		0	2.	Total CMS Downtime	0
 Total duration of excess emissions x (100) / [Total source operating time] %³ 		0.00	3.	[Total CMS Downtime] x (100) / [Total source operating time] % ³	0.00
2 Record all times in hours.		<u>I</u>	<u> </u>		
				reater of the total operating time or the total CMS downtime is a eport form and the excess emission report shall be submitted.	5 percer
Describe any changes since last quarter in C	MS, proc	ess, or contro	ols.		
Not applicable - no changes from previous of	uarter.				
I certify that the information contained in this	s report is	true, accura	te, a	and complete.	
Name: Des Gillen					
DocuSigned by:					
Signature: Des Gillen					
Title: President - BP-Husky Refining LL	.C				

¹ Form described in 40 CFR 60.7 (d)

Reporting Period Dates:	From:	July 1, 2021			To: October 1, 2021		
Company:	BP-Husky Refining LLC						
Emission Limitation:	<u>0.10 gr l</u>	H ₂ S/dscf fuel	gas	on a	3-hr rolling average		
Address:	4001 Ce	edar Point Ro	ad, C)reg	on, Ohio 43616		
Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30028039490020					<u>8039490020</u>		
Date of Latest CMS Certification or Audit:	8/31/202	21					
Process Unit(s) Description:	lso 2 Spl	itter Reboiler	(0448	302 <u>0</u>	<u>007B010)</u>		
Total Source Operating Time in Reporting Pe	eriod²:	2,208	3	hr	<u> </u>		
Emission Data Summary			CM	SP	erfomance Summary		
1. Duration of excess emissions in reporting pe	eriod due t	io:	1.	СМ	S downtime in reporting period due to:		
a. Start-up/Shutdown:		0		a.	Monitor equipment malfunctions	0	
b. Control equipment problems		0		b.	Non-monitor equipment malfunctions	0	
c. Process Problems		0		C.	Quality assurance calibration	0	
d. Other known causes		0		d.	Other known causes	0	
e. Unknown causes		0		e.	Unknown causes	0	
2. Total duration of excess emissions		0	2.	Tot	al CMS Downtime	0	
3. Total duration of excess emissions x (100) /		0.00	3.	[To	tal CMS Downtime] x (100) / [Total source	0.00	
[Total source operating time] % ³		0.00		оре	erating time] % ³	0.00	
2 Record all times in hours.							
					r of the total operating time or the total CMS downtime is form and the excess emission report shall be submitted		
Describe any changes since last quarter in C Not applicable - no changes from previous of		ess, or cont	rols.				

¹ Form described in 40 CFR 60.7 (d)

Des Gillen DocuSigned by:

Des Gillen

Name:

Title:

Date:

Signature:

Pollutant: H₂S

Preজাবিজাশ্ৰেটিকি Husky Refining LLC

	BP-HUSKY REFINING LLC - EAST SIDE MIX DRUM H2S CMS REPORT FOR 3RD QUARTER 2021												
EMISSIONS UNIT ID/Description		Reporting Requirement (choose one or both)		DEVIATION INFORMATION				CORRECTIVE ACTIONS /	WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE		
		Semi-Annual	METHOD USED TO DETERMINE COMPLIANCE	DEVIATION	DEVIATION DURATION DESCRIPTION AND		PROBABLE CAUSE FOR THE DEVIATION	PREVENTATIVE MEASURES TAKEN	MALFUNCTION? (Yes or No - If Yes, continue to the next	(If no reports were made, state "NO REPORTS" in the space	(If no reports were made, state "NO REPORTS" in the space		
	Quarterly			Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION		WEAGONES TAKEN	column)	below)	below)		
B008 - Iso 2 Feed Heater B009 - Iso 2 Stabilizer Reboiler B010 - Iso 2 Splitter Reboiler	Yes	No	Continuous Monitoring System	No downtime or excess emissions during this reporting quarter.									

Reporting Period Dates:	From:	July 1, 2021			To:	October 1, 202	<u>.1</u>				
Company:	BP-Hus	ky Refining LL	<u>C</u>								
Emission Limitation:	<u>0.10 gr l</u>	H ₂ S/dscf fuel	gas	on a	a 3-hr rolling av	<u>/erage</u>					
Address:	4001 Ce	4001 Cedar Point Road, Oregon, Ohio 43616 Siemens Maxum II, SN: 30028039490020									
Monitor Manufacturer and Model No.:	Siemens										
Date of Latest CMS Certification or Audit:	8/31/2021										
Process Unit(s) Description:	Reformer 3 Furnace (0448020007B036)										
Total Source Operating Time in Reporting Pe	eriod ² :	2,208		hr							
Emission Data Summary			CN	IS P	Perfomance Si	ummary					
Duration of excess emissions in reporting per	eriod due t	to:	1.	CM	IS downtime in	n reporting perio	d due to:				
a. Start-up/Shutdown:		0		a.	Monitor equi	pment malfuncti	ions	0			
b. Control equipment problems		0		b.	Non-monitor	equipment malf	functions	0			
c. Process Problems		0		C.	Quality assu	rance calibration	n	0			
d. Other known causes		0		d.	Other known	n causes		0			
e. Unknown causes		0		e.	Unknown ca	uses		0			
2. Total duration of excess emissions		0	2.	Tot	tal CMS Down	time		0			
3. Total duration of excess emissions x (100) /		0.00	3.	[To	otal CMS Dowr	ntime] x (100) / [Total source	0.00			
[Total source operating time] % ³		0.00		оре	erating time] %	3		0.00			
 2 Record all times in hours. 3 For the reporting period: If the total duration of exorption of greater of the total open 											
Describe any changes since last quarter in C Not applicable - no changes from previous q		ess, or contr	ols.								
I certify that the information contained in this	s report is	true, accura	te, a	and	complete.						

¹ Form described in 40 CFR 60.7 (d)

Des Gillen

DocuSigned by:

Name:

Title:

Date:

Signature:

Pollutant: H₂S

Du Gillun President - BP-Husky Refining LLC

Pollutant: H ₂ S									
Reporting Period Dates:	From:	July 1, 2021		To: October 1, 2021					
Company:	BP-Husk	-Husky Refining LLC							
Emission Limitation:	162 ppm	mv H₂S in fuel gas on a 3-hr rolling average							
Address:	4001 Ce	dar Point Roa	ad, (Oregon, Ohio 43616					
Monitor Manufacturer and Model No.:	Siemens	Maxum II, S	N: 3	0029994471080					
Date of Latest CMS Certification or Audit:	8/31/202	21							
Process Unit(s) Description:	Reforme	er 3 Furnace	(044	8020007B036)					
Total Source Operating Time in Reporting Pe	riod ² :	2,208		hr (Reformer 3 fuel gas was combusted for 2,208 ho gas was combusted for 0 hours for a total of 2,200 quarter)					
Emission Data Summary			CN	IS Perfomance Summary					
1. Duration of excess emissions in reporting per	riod due to	0:	1.	CMS downtime in reporting period due to:					
a. Start-up/Shutdown:		0		a. Monitor equipment malfunctions	1				
b. Control equipment problems		0		b. Non-monitor equipment malfunctions	0				
c. Process Problems		0		c. Quality assurance calibration	0				
d. Other known causes		0		d. Other known causes	0				
e. Unknown causes		0		e. Unknown causes	0				
2. Total duration of excess emissions		0	2.	Total CMS Downtime	1				
 Total duration of excess emissions x (100) / [Total source operating time] %³ 		0.00	3.	[Total CMS Downtime] x (100) / [Total source operating time] $\%^3$	0.05				
				reater of the total operating time or the total CMS downting eport form and the excess emission report shall be submi					
Describe any changes since last quarter in CI The Reformer 3 furnace combusted only Reform I certify that the information contained in this	er 3 fuel g	gas this quart	er.	and complete.					
Name: Des Gillen —DocuSigned by:			-						
Signature: Des Gillen			-						
Title: President - BP-Husky Refining LLC	<u> </u>		-						

¹ Form described in 40 CFR 60.7 (d)

	GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE
Pollutant: H ₂ S	

Reporting Period Dates: From: July 1, 2021 To: October 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 60 ppmv H₂S in fuel gas on a 365-day rolling average

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Siemens Maxum II, SN: 30029994471080

Date of Latest CMS Certification or Audit: 8/31/2021

Process Unit(s) Description: Reformer 3 Furnace (0448020007B036)

Total Source Operating Time in Reporting Period²: 2,208 hr

Emission Data Summarv	CMS Perfomance Summarv					
1. Duration of excess emissions in reporting period due to	CMS downtime in reporting period due to:					
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	1			
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0			
c. Process Problems	0	c. Quality assurance calibration	0			
d. Other known causes	0	d. Other known causes	0			
e. Unknown causes	0	e. Unknown causes	0			
2. Total duration of excess emissions	0	2. Total CMS Downtime	1			
3. Total duration of excess emissions x (100) /	0.00	3. [Total CMS Downtime] x (100) / [Total source	0.0			
[Total source operating time] % ³	0.00	operating time] % ³	0.0			

² Record all times in minutes.

³ For the reporting period:

If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CMS, process, or controls.

The Reformer 3 furnace combusted only Reformer 3 fuel gas this quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:
Des Gillen

Dis Gillen

Des Gillen

¹ Form described in 40 CFR 60.7 (d)

BP-HUSKY REFINING LLC - REFORMER 3 FURNACE H2S CMS REPORT FOR 3RD											
	Reporting Requirement (choose one or both)		ACTUAL METHOD USED	DEVIATION INFORMATION					WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE
EMISSIONS UNIT ID/Description		Semi-Annual	TO DETERMINE COMPLIANCE		ION DURATION DESCRIPTION AND		PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	MALFUNCTION? (Yes or No -	(If no reports were made, state	
	Quarterly			Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION			column)	below)	below)
B036 - Reformer 3 Furnace	Yes	No	Continuous Monitoring System	7/23/2021 10:00	7/23/2021 11:00	CEMS Downtime for 1 Hour.	Low sample flow	Pulled inline sample filter, cleaned, and returned to service.	No	N/A	N/A

Reporting Period Dates:	From:	July 1, 2021	_	To:	October 1, 2021		
Company:	BP-Husk	xy Refining L	<u>LC</u>				
Emission Limitation:	162 ppm	ıv H₂S in fue	l gas	on a 3-hr rolling	g average		
Address:	dar Point Ro	oad,	Oregon, Ohio 43	<u>8616</u>			
Monitor Manufacturer and Model No.:	Siemens	Maxum II, S	SN: 3	3005053196010	0		
Date of Latest CMS Certification or Audit:	·			_			
Process Unit(s) Description:		re (0448020	007F	2003)			
Total Source Operating Time in Reporting Pe		2,208					
Emission Data Summary			CM	S Perfomance	Summary		
1. Duration of excess emissions in reporting per	riod due to:		1.	CMS downtime	in reporting period du	ue to:	
a. Start-up/Shutdown:		0		a. Monitor equ	ipment malfunctions		0
b. Control equipment problems		0		b. Non-monito	r equipment malfuncti	ions	0
c. Process Problems		5		c. Quality assi	urance calibration		2
d. Other known causes		0		d. Other know	n causes		0
e. Unknown causes		0		e. Unknown ca	auses		0
2. Total duration of excess emissions		5	2.	Total CMS Dov	vntime		2
3. Total duration of excess emissions x (100) / [Total source operating time] % ³		0.23	3.	[Total CMS Dov operating time]	wntime] x (100) / [Tota % ³	al source	0.09
 Record all times in minutes. For the reporting period: If the total duration of exceptions of the total duration of exceptions. 		•	_	eater of the total op	perating time or the total Clexcess emission report sha		•
Describe any changes since last quarter in C Not applicable - no changes from previous quarter in C I certify that the information contained in this Name: Des Gillen	uarter.	·		and complete.			
Signature:							
Title: Des Gillen President - BP-Husky Refining LL0			_				

Date:

Pollutant: H₂S

¹ Form described in 40 CFR 60.7 (d)

BP-HUSKY REFINING LLC - EAST FLARE H2S CMS REPORT FOR 3RD QUARTER 2021 DEVIATION Reporting Requirement WAS DEVIATION MALFUNCTION VERBAL MALFUNCTION WRITTEN INFORMATION (choose one or both) ACTUAL METHOD CORRECTIVE ACTIONS / ATTRIBUTABLE TO A REPORT DATE REPORT DATE **EMISSIONS UNIT** PROBABLE CAUSE FOR THE JSED TO DETERMINE PREVENTATIVE MEASURES MALFUNCTION? (Yes or No -(If no reports were made, state (If no reports were made, state DEVIATION DURATION DESCRIPTION AND ID/Description DEVIATION "NO REPORTS" in the space "NO REPORTS" in the space COMPLIANCE TAKEN If Yes, continue to the next Semi-Annual MAGNITUDE Date / Time Date / Time below) column) below) OF THE DEVIATION Start End Continuous Monitoring CEMS Downtime for 2 Recalibrated and Returned P003 - East Flare No Yes 8/9/2021 10:00 8/9/2021 12:00 CGA test completed No N/A N/A System Hours. Analyzer to service. Reduced feed to the tower and Continuous Monitoring CEMS excess emissions for Ethane carry over to the Sat DeC3 nade adjustments in the upstream P003 - East Flare 9/7/2021 19:00 9/7/2021 22:00 N/A Yes No No N/A System 3 hours operations until the upset was Multiple operational adjustments Continuous Monitoring CEMS excess emissions for were made to the Absorber P003 - East Flare Yes No 7/23/2021 7:00 7/23/2021 9:00 Upset in Sat Gas Plant No N/A N/A System 2 hours Stripper tower to reduce ethanes and purge them out of the system.

Reporting Period Dates:	From:	July 1, 2021	To: October 1, 2021					
Company:	BP-Hus	ky Refining LL	<u>C</u>					
Emission Limitation:	NA - An	alyzer used to	calculate SO ₂ emissions					
Address:	4001 Ce	4001 Cedar Point Road, Oregon, Ohio 43616						
Monitor Manufacturer and Model No.:	Thermo Scientific SOLA II, SN: SL-10430115							
Date of Latest CMS Certification or Audit:	TS Low: 8/23/2021; TS High: 8/23/2021							
Process Unit(s) Description:	East Fla	re (04480200	<u>07P003)</u>					
Total Source Operating Time in Reporting Pe	eriod ² :	2,208 H	ur					
Emission Data Summary			CEMS Perfomance Summary					
1. Duration of excess emissions in reporting pe	riod due to	0:	CEMS downtime in reporting period due to:					
a. Start-up/Shutdown:		NA	a. Monitor equipment malfunctions	5				
b. Control equipment problems		NA	b. Non-monitor equipment malfunctions	0				
c. Process Problems		NA	c. Quality assurance calibration	6				
d. Other known causes		NA	d. Other known causes	5				
e. Unknown causes		NA	e. Unknown causes	0				
2. Total duration of excess emissions		NA	Total CEMS Downtime	16				
3. Total duration of excess emissions x (100) / [Total source operating time] % ³		NA	3. [Total CEMS Downtime] x (100) / [Total source operating time] % ³	0.72				
² Record all times in minutes.	roess emiss	ione is 1 percent	or greater of the total operating time or the total CMS downtime is 5	nercent				
			report form and the excess emission report shall be submitted.	perceni				
Describe any changes since last quarter in C	EMS, pro	cess, or con	rois.					

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
	DocuSigned by:
Signature:	Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	

Pollutant: Total Sulfur

¹ Form described in 40 CFR 60.7 (d)

BP-HUSKY REFINING LLC - EAST FLARE TS CMS REPORT FOR 3RD QUARTER 2021 Reporting Requirement (choose one or both) INFORMATION MALFUNCTION VERBAL MALFUNCTION WRITTEN WAS DEVIATION ACTUAL METHOD USED TO DETERMINE CORRECTIVE ACTIONS / REPORT DATE REPORT DATE EMISSIONS UNIT PROBABLE CAUSE FOR THE ATTRIBUTABLE TO A DEVIATION DURATION PREVENTATIVE MEASURES (If no reports were made, state (If no reports were made, state ID/Description DESCRIPTION AND DEVIATION MALFUNCTION? (Yes or No - If COMPLIANCE TAKEN "NO REPORTS" in the space "NO REPORTS" in the space Semi-Annual MAGNITUDE Yes, continue to the next column Date / Time Date / Time OF THE DEVIATION Start End Continuous Monitoring Recalibrated and Returned P003 - East Flare No Yes 8/13/2021 10:00 8/13/2021 11:00 CEMS Downtime for 1 Hour. Recalibrate for drift No N/A N/A System Analyzer to service. Continuous Monitoring CEMS Downtime for 6 Recalibrated and Returned P003 - East Flare Yes 8/23/2021 9:00 8/23/2021 15:00 N/A N/A No CGA test completed No Hours. Analyzer to service. System CEMS Downtime for 4 Semi annual PM.Replace sample Continuous Monitoring Recalibrated and Returned P003 - East Flare No Yes 9/29/2021 14:00 9/29/2021 18:00 No N/A N/A System Hours. injection valves Analyzer to service. CEMS Downtime for 5 Continuous Monitoring Repaired sample leak on high gas Recalibrated and Returned P003 - East Flare No Yes 9/30/2021 14:00 9/30/2021 19:00 No N/A N/A System Hours. validation cycle. Analyzer to service.

Reporting Period Dates:	From:	July 1, 2021	To: October 1, 2021	
Company:	BP-Husl	ky Refining LL	<u>C</u>	
Emission Limitation:	162 ppm	nv H₂S in fuel	gas on a 3-hr rolling average	
Address:	4001 Ce	dar Point Roa	id, Oregon, Ohio 43616	
Monitor Manufacturer and Model No.:	Siemens	s Maxum II, S	N: 30050531960400	
Date of Latest CMS Certification or Audit:	8/10/202	21		
Process Unit(s) Description:	West Fla	are Vent Gas	(0448020007P004)	
Total Source Operating Time in Reporting Pe		2,208	•	
Emission Data Summary			CMS Perfomance Summary	
1. Duration of excess emissions in reporting per	riod due to	:	CMS downtime in reporting period due to:	
a. Start-up/Shutdown:		0	a. Monitor equipment malfunctions	0
b. Control equipment problems		0	b. Non-monitor equipment malfunctions	0
c. Process Problems		0	c. Quality assurance calibration	3
d. Other known causes		0	d. Other known causes	1
e. Unknown causes		0	e. Unknown causes	0
Total duration of excess emissions		0	2. Total CMS Downtime	4
3. Total duration of excess emissions x (100) / [Total source operating time] % ³		0.00	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.18
 Record all times in minutes. For the reporting period: If the total duration of exceptions of the total duration of exceptions. 		•	or greater of the total operating time or the total CMS downtime is report form and the excess emission report shall be submitted.	5 percent of
Describe any changes since last quarter in Control Not applicable - no changes from previous quarter in Control I certify that the information contained in this Name: Des Gillen	uarter.			
DocuSigned by:			-	
Signature: Des Gilles			-	
Title: President - BP-Husky Refining LLC	С			

Date:

Pollutant: H₂S

¹ Form described in 40 CFR 60.7 (d)

162 ppmv H₂S in fuel gas on a 3-hr rolling average

4001 Cedar Point Road, Oregon, Ohio 43616

To:

October 1, 2021

From: <u>July 1, 2021</u>

BP-Husky Refining LLC

Siemens Maxum II, SN: 009300

Date of Latest CMS Certification or Audit:	8/31/202	1		
Process Unit(s) Description:	West Fla	re C Valve (<u>0448020007P004)</u>	
Total Source Operating Time in Reporting P	eriod ² :	2,208	<u>hr</u>	
Emission Data Summarv			CMS Perfomance Summary	
1. Duration of excess emissions in reporting pe	eriod due to:		CMS downtime in reporting period due to:	
a. Start-up/Shutdown:		NA	a. Monitor equipment malfunctions	0
b. Control equipment problems		NA	b. Non-monitor equipment malfunctions	0
c. Process Problems		NA	c. Quality assurance calibration	1
d. Other known causes		NA	d. Other known causes	0
e. Unknown causes		NA	e. Unknown causes	0
2. Total duration of excess emissions		NA	2. Total CMS Downtime	1
3. Total duration of excess emissions x (100) / [Total source operating time] % ³	'	NA ⁴	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.05
² Record all times in minutes.	•			•
			or greater of the total operating time or the total CMS downtime is report form and the excess emission report shall be submitted.	5 percent of
⁴ Excess emissions are reported in the West Flare V	ent Gas sectio	n, and are not i	ncluded in this section to avoid double counting.	
Describe any changes since last quarter in O	· -	ss, or contr	ols.	
I certify that the information contained in thi	is report is	true, accura	ite, and complete.	

90F20640AD13450... President - BP-Husky Refining LLC

Pollutant: H₂S

Company:

Address:

Reporting Period Dates:

Monitor Manufacturer and Model No.:

Des Gillen

¹ Form described in 40 CFR 60.7 (d)

DocuSigned by:

Des Gillen

Name:

Title:

Date:

Signature:

Emission Limitation:

BP-HUSKY REFINING LLC - WEST FLARE H2S CMS REPORT FOR 3RD QUARTER 2021 DEVIATION INFORMATION Reporting Requirement (choose one or both) MALFUNCTION VERBAL REPORT DATE MALFUNCTION WRITTEN REPORT DATE WAS DEVIATION ATTRIBUTABLE TO A ACTUAL METHOD USED TO DETERMINE CORRECTIVE ACTIONS / PREVENTATIVE MEASURES **EMISSIONS UNIT** DEVIATION DURATION PROBABLE CAUSE FOR THE DESCRIPTION AND MALFUNCTION? (Yes or No (If no reports were made, state (If no reports were made, state ID/Description DEVIATION Quarterly COMPLIANCE MAGNITUDE TAKEN If Yes, continue to the next "NO REPORTS" in the space "NO REPORTS" in the space Semi-Annual Date / Time Date / Time OF THE DEVIATION column) End Revalidation following vent piping Continuous Monitoring CEMS Downtime for 1 Recalibrated and Returned P004 - West Flare No 7/7/2021 8:00 7/7/2021 9:00 N/A No N/A Analyzer to service. System Hour. CEMS Downtime for 3 Recalibrated and Returned Continuous Monitoring P004 - West Flare Yes No 8/10/21 9:00 8/10/21 12:00 CGA test completed No N/A N/A System Hours. Analyzer to service.

To:

October 1, 2021

From: July 1, 2021

Company:	BP-Husky Refining LLC							
Emission Limitation:	NA - Ana	alyzer used to	calculate SO2 emissions					
Address:	4001 Ce	dar Point Roa	d, Oregon, Ohio 43616					
Monitor Manufacturer and Model No.:	Thermo	Scientific SOL	<u> A II, SN: SL-10440115</u>					
Date of Latest CMS Certification or Audit:	TS Low:	8/24/2021; TS	S High: 8/24/2021					
Process Unit(s) Description:	Description: West Flare Vent Gas (0448020007P004)							
Total Source Operating Time in Reporting Pe	Total Source Operating Time in Reporting Period ² : 2,208 hr							
Emission Data Summary			CEMS Perfomance Summary					
1. Duration of excess emissions in reporting pe	riod due to):	CEMS downtime in reporting period due to:					
a. Start-up/Shutdown:		NA	a. Monitor equipment malfunctions	0				
b. Control equipment problems		NA	b. Non-monitor equipment malfunctions	0				
c. Process Problems		NA	c. Quality assurance calibration	0				
d. Other known causes		NA	d. Other known causes	10				
e. Unknown causes		NA	e. Unknown causes	0				
2. Total duration of excess emissions		NA	2. Total CEMS Downtime	10				
3. Total duration of excess emissions x (100) / [Total source operating time] % ³		NA	3. [Total CEMS Downtime] x (100) / [Total source operating time] % ³	0.45				
 Record all times in minutes. For the reporting period: If the total duration of ex 	cess emissi	ons is 1 percent	or greater of the total operating time or the total CMS downtime is	5 percent of				

greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
	DocuSigned by:
Signature:	DocuSigned by: Des Gillen
Title:	President - BP-Husky Refining LLC
Date:	

Pollutant: Total Sulfur
Reporting Period Dates:

¹ Form described in 40 CFR 60.7 (d)

	GASEOUS AND OPACITY	EXCESS EMISSION	AND MONITORING	SYSTEM PERFORMAN	JΈ
Pollutant: Total S	Sulfur				

Reporting Period Dates: From: July 1, 2021 To: October 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: NA - Analyzer used to calculate SO2 emissions

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II, SN: SL-09030713

Date of Latest CMS Certification or Audit: 9/1/2021

Process Unit(s) Description: West Flare C Valve (0448020007P004)

Total Source Operating Time in Reporting Period²: 2,208 hr

Emission Data Summary	CEMS Perfomance Summary			
Duration of excess emissions in reporting period due to:		CEMS downtime in reporting period due to:		
a. Start-up/Shutdown:	NA	a. Monitor equipment malfunctions	0	
b. Control equipment problems	NA	b. Non-monitor equipment malfunctions	0	
c. Process Problems	NA	c. Quality assurance calibration	0	
d. Other known causes	NA	d. Other known causes	6	
e. Unknown causes	NA	e. Unknown causes	0	
2. Total duration of excess emissions	NA	2. Total CEMS Downtime	6	
3. Total duration of excess emissions x (100) /	NA	3. [Total CEMS Downtime] x (100) / [Total source	0.27	
[Total source operating time] % ³	INA	operating time] % ³	0.27	
² Record all times in minutes.				

For the reporting period:

If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent of greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not applicable - no changes from previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
Signature:	DocuSigned by:
Title:	<u>Des Gilles</u> <u>President 518P</u> 6-Husky Refining LLC
Date:	

¹ Form described in 40 CFR 60.7 (d)

BP-HUSKY REFINING LLC - WEST FLARE TS CMS REPORT FOR 3RD QUARTER 2021 Reporting Requirement (choose one or both) DEVIATION WAS DEVIATION MALFUNCTION VERBAL MALFUNCTION WRITTEN INFORMATION ACTUAL METHOD CORRECTIVE ACTIONS / ATTRIBUTABLE TO A REPORT DATE REPORT DATE **EMISSIONS UNIT** PROBABLE CAUSE FOR THE JSED TO DETERMINE PREVENTATIVE MEASURES MALFUNCTION? (Yes or No -(If no reports were made, state "NO REPORTS" in the space DEVIATION DURATION (If no reports were made, state DESCRIPTION AND ID/Description DEVIATION COMPLIANCE TAKEN If Yes, continue to the next "NO REPORTS" in the space MAGNITUDE Quarterly Semi-Annual Date / Time Date / Time column) below) below) OF THE DEVIATION Start End Continuous Monitoring CEMS Downtime for 2 Recalibrated and Returned P004 - West Flare Yes No 7/14/21 9:00 7/14/21 11:00 Semi-annual PM No N/A N/A System Analyzer to service. Continuous Monitoring CEMS Downtime for 2 Recalibrated and Returned P004 - West Flare Yes No 7/22/21 9:00 7/22/21 11:00 Recalibrate for drift No N/A N/A Analyzer to service. System Hour. CEMS Downtime for 6 Recalibrated and Returned Continuous Monitoring P004 - West Flare Yes No 9/27/21 9:00 9/27/21 15:00 PM-Replace sample pump No N/A N/A System Hours. Analyzer to service.

Pollutant: NOX									
Reporting Period Dates:	From:	July 1, 202	<u>21</u>	To: October 1, 2021					
Company:	BP-Husl	ky Refining	LL(2					
Emission Limitation:	40 ppm _v	ppm _{vd} (30-day rolling average)							
Address:	4001 Ce	4001 Cedar Point Road, Oregon, Ohio 43616 ABB LIMAS 11UV and ABB MAGNOS O2							
Monitor Manufacturer and Model No.:	ABB LIM								
Date of Latest CEMS Certification or Audit:	8/6/2021								
Process Unit(s) Description:	Reforme	er 3 Furnac	e ((0448020007B036)					
Total Source Operating Time in Reporting Per		-							
Emission Data Summary			CE	MS Perfomance Summary					
1. Duration of excess emissions in reporting per	iod due to:		1.	CEMS downtime in reporting period due to:					
a. Start-up/Shutdown		0		a. Monitor equipment malfunctions	0				
b. Control equipment problems		0		b. Non-monitor equipment malfunctions	0				
c. Process Problems		0		c. Quality assurance calibration	0				
d. Other known causes		0		d. Other known causes	0				
e. Unknown causes		0		e. Unknown causes	0				
2. Total duration of excess emissions		0	2.	Total CEMS Downtime	0				
 Total duration of excess emissions x (100) / [Total source operating time] %³ 		0.00	3.	[Total CEMS Downtime] x (100) / [Total source operating time] % ³	0.00				
. o. a.o. oporanig ponoun		•		r greater of the total operating time or the total CEMS downti summary report form and the excess emission report shall b					
Describe any changes since last quarter in CE Not Applicable - No changes since the previo I certify that the information contained in this	us quarter.								
Name: Des Gillen									
DocuSigned by:									
Signature: <u>Des Gillen</u>									
90F20640AD13450									

Title:

Date:

President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

	BP-HUSKY REFINING LLC - REFORMER 3 FURNACE NOx CEMS REPORT FOR 3RD QUARTER 2021										
EMISSIONS	Reporting Requirement (choose one or both) ACTUAL METHOD USED DEVIATION INFORMATION				WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE				
UNIT ID/Description			TO DETERMINE COMPLIANCE	DEVIATION	DEVIATION DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	AUSE FOR THE DEVIATION CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKE		(If no reports were made, state "NO REPORTS" in the space	
ID/Description	Quarterly	Semi-Annual	COMPLIANCE	Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION			If Yes, continue to the next column)	below)	below)
B036 - Reformer 3 Furnace	Yes	No	Continuous Emission Monitoring System (CEMS)		No downtime or excess emissions during this reporting quarter.						

To:

October 1, 2021

From: <u>July 1, 2021</u>

Company:		BP-Husl	ky Refining	<u>ı LLC</u>	
Emission Li	imitation:	500 ppm	nv CO, db,	1-hr average	
Address:		4001 Ce	edar Point l	Road, Oregon, Ohio 43616	
Monitor Mai	nufacturer and Model No.:	ABB UR	RAS 14, SN	<u>l: 3.240684.3</u>	
Date of Late	est CEMS Certification or Audit:	8/11/202	21		
Process Un	it(s) Description:	FCCU/C	O Boiler E	Sypass, 0448020007P007	
Total Sourc	e Operating Time in Reporting Per	riod²:	0	<u>hr</u>	
Emission D	ata Summary			CMS Perfomance Summary	
1. Duration	of excess emissions in reporting per	iod due to:		CMS downtime in reporting period due to:	
a. Start-	-up/Shutdown:		0	a. Monitor equipment malfunctions	0
b. Contr	rol equipment problems		0	b. Non-monitor equipment malfunctions	0
c. Proce	ess Problems		0	c. Quality assurance calibration	0
d. Other	r known causes		0	d. Other known causes	4
e. Unkn	own causes		0	e. Unknown causes	0
2. Total dur	ration of excess emissions		0	2. Total CMS Downtime	4
	ration of excess emissions x (100) /		0	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total so	urce operating time] % ³ es in hours, hours of operation are defined as when FCCU feed	was in the unit and	the CO Pailor bur	operating time] % ³	
	eporting period: If the total duration of exc	cess emissio	ns is 1 perce	ent or greater of the total operating time or the total CMS downti the summary report form and the excess emission report shall	
Not Applicable	the information contained in this Des Gillen Docusigned by: Des Gillen Docusigned by: Des Gillen 90F20640AD13450	er.	·		
Title:	President - BP-Husky Refining LLC)			

Date:

Pollutant: CO

Reporting Period Dates:

¹ Form described in 40 CFR 60.7 (d)

	BP-HUSKY REFINING LLC - FCC REGEN VENT CO CEMS REPORT 3RD QUARTER 2021											
EMISSIONS UNIT —	Reporting Requirement (choose one or both) ACTUAL METHOD USE			DEVIATION INFORMATION		PROBABLE CAUSE FOR	CORRECTIVE ACTIONS /	WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE		
	Quarterly		TO DETERMINE	DEVIATION	DURATION	DESCRIPTION AND	THE DEVIATION	PREVENTATIVE MEASURES TAKEN	MALFUNCTION? (Yes or No- If Yes, continue to the next column)	(If no reports were made, state "No Reports" in the space below)	(If no reports were made, state "No Reports" in the space below)	
		Semi-Annual	-Annual COMPLIANCE	Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION						
P007 - FCCU / CO Boiler Bypass Stack	Yes	No	Continuous Emissions Monitoring System (CEMS)		Bypass Stack not in operation during the quarter, therefore no excess emissions or part 60 CEMS downtime to report.							

Pollutant: NOx											
Reporting Period Dates:	From:	July 1, 20	<u>21</u>	To	o :	October 1, 2021					
Company:	BP-Husl	ky Refining	LLC								
Emission Limitation:	58.1 ppr	58.1 ppmv NOx db @ 0% O2 (365-day rolling avg)									
Address:	4001 Ce	4001 Cedar Point Road, Oregon, Ohio 43616									
Monitor Manufacturer and Model No.:	ABB LIN	ABB LIMAS 11UV and ABB MAGNOS O2, SN: 3.240682.3									
Date of Latest CEMS Certification or Audit	: 8/11/202	8/11/2021									
Process Unit(s) Description:	FCCU/C	O Boiler B	ypas	s, 0448020	007F	<u>2007</u>					
Total Source Operating Time in Reporting	Period ² :	0		hr_							
Emission Data Summary			CMS	S Perfomai	nce	Summary					
1. Duration of excess emissions in reporting	period due to:		1.	CMS down	time	in reporting period due to:					
a. Start-up/Shutdown:		0	;	a. Monitor	equ	ipment malfunctions	0				
b. Control equipment problems		0		b. Non-mo	onito	r equipment malfunctions	0				
c. Process Problems		0		c. Quality	assı	ırance calibration	0				
d. Other known causes		0		d. Other k	now	n causes	4				
e. Unknown causes		0		e. Unknow	vn ca	auses	0				
2. Total duration of excess emissions		0	2.	Total CMS	Dow	vntime	0				
3. Total duration of excess emissions x (100) /	0	3.	Total CMS	Dov	vntime] x (100) / [Total source	0.00				
[Total source operating time] % ³				operating ti	ime]	% ³					
2 Record all times in hours. hours of operation are defined as when FCCU ³ For the reporting period: If the total duration of the control of the					total	operating time or the total CMS downti	me is 5				
						n and the excess emission report shall					
Describe any changes since last quarter in	n CEMS, proce	ess, or co	ntrols	S.							
Not Applicable - No changes since the previous quarte	er.										
I certify that the information contained in t	his report is t	rue, accur	ate, a	and compl	lete.						
Name: Des Gillen			_								
Signature: Des Gillen			_								
Title: President - BP-Husky Refining	LLC										

Date:

¹ Form described in 40 CFR 60.7 (d)

To:

October 1, 2021

From: <u>July 1, 2021</u>

BP-Husky Refining LLC

Emission Limitation:	93.4 ppmv NOx db @ 0% O2 (7-day rolling avg)								
Address:	4001 Ce	edar Point F	Road, Oregon, Ohio 43616						
Monitor Manufacturer and Model No.:	ABB LIM	MAS 11UV	and ABB MAGNOS O2, SN: 3.240682.3						
Date of Latest CEMS Certification or Audit:	8/11/202	21							
Process Unit(s) Description:	FCCU/CO Boiler Bypass, 0448020007P007								
Total Source Operating Time in Reporting Period	od²:	0	hr						
Emission Data Summary			CMS Perfomance Summary						
1. Duration of excess emissions in reporting period	od due to:		CMS downtime in reporting period due to:						
a. Start-up/Shutdown:		0	a. Monitor equipment malfunctions	0					
b. Control equipment problems		0	b. Non-monitor equipment malfunctions	0					
c. Process Problems		0	c. Quality assurance calibration	0					
d. Other known causes		0	d. Other known causes	4					
e. Unknown causes		0	e. Unknown causes	0					
2. Total duration of excess emissions		0	2. Total CMS Downtime	0					
3. Total duration of excess emissions x (100) /		0	3. [Total CMS Downtime] x (100) / [Total source	0.00					
[Total source operating time] % ³ 2 Record all times in hours. hours of operation are defined as when FCCU feed wa	as in the unit and	the CO Beiler ham	operating time] % ³						
³ For the reporting period: If the total duration of exce	ess emissio	ns is 1 perce	nt or greater of the total operating time or the total CMS downting the summary report form and the excess emission report shall be						
Describe any changes since last quarter in CEN Not Applicable - No changes since the previous quarter. I certify that the information contained in this re Name: Des Gillen Docusigned by: Signature:		·							

Title: Date: Des Gillen

Pollutant: NOx

Company:

Reporting Period Dates:

90F20640AD13450... President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

	BP-HUSKY REFINING LLC - FCC REGEN VENT NOx CEMS REPORT 3RD QUARTER 2021												
	Reporting Requirement (choose one or both)		ACTUAL METHOD USED	DEVIATION INFORMATION			CORRECTIVE	WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE			
EMISSIONS UNIT ID/Description	0	TO DETERMINE COMPLIANCE		DEVIATION DURATION DESCRIPTION AND		PROBABLE CAUSE FOR THE DEVIATION	ACTIONS / PREVENTATIVE	MALFUNCTION? (Yes or No - If Yes, continue to the next	(If no reports were made, state "No Reports" in the space	(If no reports were made, state "No Reports" in the space			
	Quarterly	Semi-Annual		Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION		MEASURES TAKEN	column)	below)	below)		
P007 - FCCU / CO Boiler Bypass Stack	Yes	No	Continuous Emissions Monitoring System (CEMS)			Bypass Sta	ack not in operation during the q	ess emissions or part 60 CEMS o	lowntime to report.				

_					
Reporting Period Dates:	From:	July 1, 202	<u>21</u> To :	October 1, 2021	
Company:	BP-Husl	ky Refining	LLC		
Emission Limitation:	260 ppm	nvd SO2 at	0% excess O2 as	s a rolling 7-day average	
Address:	4001 Ce	edar Point f	Road, Oregon, Oh	io 43616	
Monitor Manufacturer and Model No.:	ABB LIN	MAS 11UV	and ABB MAGNC	S O2, SN: 3.240685.3	
Date of Latest CEMS Certification or Audit:	8/11/202	21			
Process Unit(s) Description:			pass, 0448020007F	007	
Total Source Operating Time in Reporting Peri	_	0	hr	<u> </u>	
Emission Data Summary			CMS Perfomance	e Summary	
1. Duration of excess emissions in reporting period	od due to:		1. CMS downtir	ne in reporting period due to:	
a. Start-up/Shutdown:		0	a. Monitor e	quipment malfunctions	0
b. Control equipment problems		0	b. Non-mon	itor equipment malfunctions	0
c. Process Problems		0	c. Quality a	ssurance calibration	0
d. Other known causes		0	d. Other kno	own causes	4
e. Unknown causes		0	e. Unknown	causes	0
2. Total duration of excess emissions		0	2. Total CEMS		0
3. Total duration of excess emissions x (100) /		0		Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³ 2 Record all times in hours. hours of operation are defined as when FCCU feed w.	as in the unit and	the CO Boiler byp	operating tim	e] % ³	
³ For the reporting period: If the total duration of exce	ess emissio	ns is 1 perce	nt or greater of the to	tal operating time or the total CMS downting orm and the excess emission report shall	
Describe any changes since last quarter in CEI Not Applicable - No changes since the previous quarter. I certify that the information contained in this r Name: Des Gillen Docusigned by: Des Gillen President - BP-Husky Refining LLC				e.	
Date:					

Pollutant: SO₂

¹ Form described in 40 CFR 60.7 (d)

Reporting P	eriod Dates:	From:	July 1, 202	21 To : October 1, 2021	
Company:		BP-Husk	ky Refining	LLC	
Emission Li	mitation:	160 ppm	nvd SO2 at	0% excess O2 as a rolling 365-day average	
Address:		4001 Ce	dar Point F	Road, Oregon, Ohio 43616	
Monitor Man	nufacturer and Model No.:	ABB LIM	1AS 11UV	and ABB MAGNOS O2, SN: 3.240685.3	
Date of Late	st CEMS Certification or Audit:	8/11/202	21		
Process Uni	t(s) Description:	FCCU/C	O Boiler Byp	pass, 0448020007P007	
Total Source	e Operating Time in Reporting Perio	od²:	0	hr	
Emission Da	ata Summary			CMS Perfomance Summary	
	of excess emissions in reporting perio	od due to:		CMS downtime in reporting period due to:	
	up/Shutdown:	d duc to.	0	a. Monitor equipment malfunctions	0
	ol equipment problems		0	b. Non-monitor equipment malfunctions	0
	ess Problems		0	c. Quality assurance calibration	0
	known causes		0	d. Other known causes	4
e. Unkno	own causes		0	e. Unknown causes	0
2. Total dura	ation of excess emissions		0	2. Total CMS Downtime	0
3. Total dura	ation of excess emissions x (100) /		0	3. [Total CMS Downtime] x (100) / [Total source	0.00
[Total sou	urce operating time] % ³			operating time] % ³	
		ss emissio	ns is 1 perce	nt or greater of the total operating time or the total CMS downtime in the summary report form and the excess emission report shall be	s 5
	y changes since last quarter in CEN - No changes since the previous quarter.	MS, proce	ess, or cor	ntrols.	
-	the information contained in this re	eport is t	rue, accur	ate, and complete.	
Name:	Des Gillen —DocuSigned by:			-	
Signature:	Des Gillen			-	
Title:	President - BP-Husky Refining LLC			-	
Date:				-	
¹ Form describe	ed in 40 CFR 60.7 (d)				

Pollutant: SO₂

Pollutant: SO ₂										
Reporting Period Dates:	From:	July 1, 20	<u>21</u>	To:	October 1, 2021					
Company:	BP-Husl	ky Refining	LLC							
Emission Limitation:	1,020 to	1,020 tons SO2 per rolling 12-month period								
Address:	4001 Ce	4001 Cedar Point Road, Oregon, Ohio 43616								
Monitor Manufacturer and Model No.:	ABB LIN	NBB LIMAS 11UV and ABB MAGNOS O2, SN: 3.240685.3								
Date of Latest CEMS Certification or Audit:	8/11/202									
Process Unit(s) Description:	FCCU/C	O Boiler By	pass, 04480200	007P00	<u>7</u>					
Total Source Operating Time in Reporting Per	riod²:	0	hr							
Emission Data Summary			CMS Perfom	nance \$	Summary					
1. Duration of excess emissions in reporting per	iod due to:		1. CMS dow	vntime	in reporting period due to:					
a. Start-up/Shutdown:		0	a. Monit	tor equi	pment malfunctions	0				
b. Control equipment problems		0	b. Non-r	monitor	equipment malfunctions	0				
c. Process Problems		0	c. Qualit	ty assu	rance calibration	0				
d. Other known causes		0	d. Other	r knowr	n causes	4				
e. Unknown causes		0	e. Unkno	own ca	uses	0				
Total duration of excess emissions		0	2. Total CM	IS Dow	ntime	0				
3. Total duration of excess emissions x (100) /		0			vntime] x (100) / [Total source	0.00				
[Total source operating time] % ³ 2 Record all times in hours. hours of operation are defined as when FCCU feed	was in the unit and	the CO Boiler byn	operating		% ³					
³ For the reporting period: If the total duration of exc	cess emissio	ns is 1 perce	nt or greater of th	he total	operating time or the total CMS downting and the excess emission report shall					
Describe any changes since last quarter in CE Not Applicable - No changes since the previous quarter.	•	·								
I certify that the information contained in this	report is t	rue, accui	ate, and com	plete.						
Name: Des Gillen DocuSigned by:			-							
Signature: <u>Des Gillen</u>			_							
Title: President - BP-Husky Refining LLC										

Date:

¹ Form described in 40 CFR 60.7 (d)

From: <u>July 1, 2021</u> To:

October 1, 2021

Company:		BP-Husk	ky Refining	LLC	
Emission Li	mitation:	0.92 lb S	O2 per 10	00 lb of fresh feed	
Address:		4001 Ce	dar Point I	Road, Oregon, Ohio 43616	
Monitor Mar	nufacturer and Model No.:	ABB LIM	1AS 11UV	and ABB MAGNOS O2, SN: 3.240685.3	
Date of Late	est CEMS Certification or Audit:	8/11/202	21		
Process Uni	it(s) Description:	FCCU/C	O Boiler By	pass, 0448020007P007	
Total Source	e Operating Time in Reporting Per	iod²:	0	hr_	
Emission Da	ata Summary			CMS Perfomance Summary	
1. Duration	of excess emissions in reporting peri	od due to:		1. CMS downtime in reporting period due to:	
a. Start-	up/Shutdown:		0	a. Monitor equipment malfunctions	0
b. Contr	ol equipment problems		0	b. Non-monitor equipment malfunctions	0
c. Proce	ess Problems		0	c. Quality assurance calibration	0
d. Other	known causes		0	d. Other known causes	4
e. Unkn	own causes		0	e. Unknown causes	0
2. Total dura	ation of excess emissions		0	2. Total CMS Downtime	0
[Total sou	ation of excess emissions x (100) / urce operating time] % ³ es in hours. hours of operation are defined as when FCCU feed w		0	3. [Total CMS Downtime] x (100) / [Total source operating time] % ³	0.00
		otal operatin	g time, both	ent or greater of the total operating time or the total CMS downting the summary report form and the excess emission report shall ntrols.	
I certify that	- No changes since the previous quarter. the information contained in this	report is t	rue, accui	rate, and complete.	
Name:	Des Gillen			-	
Signature:	Des Gillen			-	
Title:	President - BP-Husky Refining LLC			_	
Date:				-	
¹ Form describe	ed in 40 CFR 60.7 (d)				

Pollutant: SO₂

Reporting Period Dates:

	BP-HUSKY REFINING LLC - FCC REGEN VENT SO2 CEMS REPORT 3RD QUARTER 2021												
EMISSIONS UNIT	Reporting Requirement (choose one or both)		ACTUAL METHOD USED	DEVIATION INFORMATION			CORRECTIVE	WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE			
				TO DETERMINE COMPLIANCE	DEVIATION DURATION DESCRIPTION AND		PROBABLE CAUSE FOR THE DEVIATION	PREVENTATIVE	MALFUNCTION? (Yes or No - If Yes, continue to the next	(If no reports were made, state "No Reports" in the space	(If no reports were made, state "No Reports" in the space		
	Quarterly Se			Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION		MEASURES TAKEN	column)	below)	below)		
P007 - FCCU / CO Boiler Bypass Stack	Yes	No	Continuous Emissions Monitoring System (CEMS)		Bypass Stack not in operation during the quarter, therefore no excess emissions or part 60 CEMS downtime to report.								

To:

CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

October 1, 2021

From: <u>July 1, 2021</u>

8/11/2021

BP-Husky Refining LLC

500 ppmv CO, db, 1-hr average

ABB URAS 26, SN: 3.347698.3

4001 Cedar Point Road, Oregon, Ohio 43616

• • • • • • • • • • • • • • • • • • • •			
Total Source Operating Time in Reporting Period ² :	2,208	3 hr	
Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to):	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	0
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	0	2. Total CEMS Downtime	0
3. Total duration of excess emissions x (100) /	0	3. Total CEMS Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³		operating time] % ³	
greater of the total operating time, bo	oth the summa	t or greater of the total operating time or the total CMS downtime is 5 ry report form and the excess emission report shall be submitted.	percent c
Describe any changes since last quarter in CEMS, proc	ess, or con	trols.	
Not Applicable - No changes since the previous quarter.			
I certify that the information contained in this report is	true, accura	ate, and complete.	
Name: Des Gillen			

President - Bro-Husky Refining LLC

Pollutant: CO

Company:

Address:

Reporting Period Dates:

Monitor Manufacturer and Model No.:

Process Unit(s) Description:

Date of Latest CEMS Certification or Audit:

DocuSigned by:

Des Gillen

¹ Form described in 40 CFR 60.7 (d)

Signature:

Title:

Date:

Emission Limitation:

	BP-HUSKY REFINING LLC - FCC/CO BOILER CO CEMS REPORT 3RD QUARTER 2021											
	Reporting Requirement (choose one or both)		ACTUAL METUOD	DEVIATION INFORMATION			CORRECTIVE	WAS DEVIATION	MALFUNCTION VERBAL	MALFUNCTION WRITTEN		
EMISSIONS UNIT ID/Description			USED TO DETERMINE COMPLIANCE	DEVIATION	DURATION	DESCRIPTION AND	PROBABLE CAUSE FOR THE DEVIATION	ACTIONS / PREVENTATIVE MEASURES TAKEN	ATTRIBUTABLE TO A MALFUNCTION? (Yes or No- If Yes, continue to the next column)	REPORT DATE (If no reports were made, state "No Reports" in the space below)	REPORT DATE (If no reports were made, state "No Reports" in the space below)	
	Quarterly	Semi-Annual	COMPLIANCE	Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION						
P007 - FCCU / CO Boiler Bypass Stack	Yes	No	Continuous Emissions Monitoring System (CEMS)		No downtime or excess emissions during this reporting quarter.							

Pollutant:	NOx
------------	-----

Reporting Period Dates: From: July 1, 2021 To: October 1, 2021

Company: BP-Husky Refining LLC

Emission Limitation: 93.4 ppmv NOx db @ 0% O2 (7-day rolling avg)

Address: 4001 Cedar Point Road, Oregon, Ohio 43616

Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7

Date of Latest CEMS Certification or Audit: 8/11/2021

Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007

Total Source Operating Time in Reporting Period²: 2,208 hr

Emission Data Summary	CEMS Perfomance Summary					
1. Duration of excess emissions in reporting period due to	CEMS downtime in reporting period due to:					
a. Start-up/Shutdown:	0	a. Monitor equipment malfunctions	0			
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0			
c. Process Problems	0	c. Quality assurance calibration	0			
d. Other known causes	0	d. Other known causes	0			
e. Unknown causes	0	e. Unknown causes	0			
2. Total duration of excess emissions	0	2. Total CEMS Downtime	0			
3. Total duration of excess emissions x (100) /	0	3. [Total CEMS Downtime] x (100) / [Total source	0.00			
[Total source operating time] % ³		operating time] % ³				

³ For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report shall be submitted.

Describe any changes since last quarter in CEMS, process, or controls.

Not Applicable - No changes since the previous quarter.

I certify that the information contained in this report is true, accurate, and complete.

Name:	Des Gillen
Signature:	DocuSigned by:
Title:	Des Gillen President - BP-Husky Refining LLC
Date:	——90F20640AD13450

¹ Form described in 40 CFR 60.7 (d)

Pollutant: NOx										
Reporting Period Dates:	From:	July 1, 2021	<u>1</u>	To:	October 1, 2021					
Company:	BP-Husl	ky Refining L	<u>LC</u>							
Emission Limitation:	58.1 ppr	nv NOx db @	 db @ 0% O2 (365-day rolling avg)							
Address:	4001 Ce	dar Point Ro	oad, Or	egon, Ohio	43616					
Monitor Manufacturer and Model No.:	ABB LIM	IAS 11UV ar	nd ABB	MAGNOS 1	 106, SN: 3.340641.7					
Date of Latest CEMS Certification or Audit										
Process Unit(s) Description:			ludina F	CC Regen F	lue Gas, 0448020007P007					
Total Source Operating Time in Reporting	·	2,208		_						
Total Course Operating Time in Reporting			- '''	_						
Emission Data Summary			CEMS	Perfoman	ce Summary					
1. Duration of excess emissions in reporting	period due to	:	1. CI	EMS downti	me in reporting period due to:					
a. Start-up/Shutdown:		0	a.	Monitor ed	quipment malfunctions	0				
b. Control equipment problems		0	b.	Non-monit	tor equipment malfunctions	0				
c. Process Problems		0	C.	Quality as	surance calibration	0				
d. Other known causes		0	d.	Other know	wn causes	0				
e. Unknown causes		0	e.	Unknown	causes	0				
2. Total duration of excess emissions		0	2. To	otal CEMS D	Downtime	0				
3. Total duration of excess emissions x (100)) /	0	3. [T	otal CEMS I	Downtime] x (100) / [Total source	0.00				
[Total source operating time] % ³			op	perating time	e] % ³					
³ For the reporting period: If the total duration of					operating time or the total CMS downtime is excess emission report shall be submitted.	5 percent o				
Describe any changes since last quarter in Not Applicable - No changes since the previous quarter in the contained in the co	uarter.	·		d complete.						
Name: Des Gillen	•	•	_	•						
Signature:										

Title:

Date:

Pression and Part Bar Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

	BP-HUSKY REFINING LLC - FCC/CO BOILER NOx CEMS REPORT 3RD QUARTER 2021											
EMISSIONS LINIT	Reporting Requirement (choose one or both)		ACTUAL METHOD	DEVIATION INFORMATION			CORRECTIVE ACTIONS /	WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE		
EMISSIONS UNIT ID/Description			USED TO DETERMINE	DEVIATION	ON DURATION DESCRIPTION AND		PROBABLE CAUSE FOR THE DEVIATION		MALFUNCTION? (Yes or No -		(If no reports were made, state "No Reports" in the space	
	Quarterly	Semi-Annual		Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION		MEASURES TAKEN	column)	below)	below)	
P007 - FCCU / CO Boiler Bypass Stack	Yes	No	Continuous Emissions Monitoring System (CEMS)		No downtime or excess emissions during this reporting quarter.							

Pollutant: SO ₂							
Reporting Period Dates:	From:	July 1, 2021		To:	October 1, 2021		
Company:	BP-Hus	ky Refining L	LC				
Emission Limitation:	260 ppn	nvd SO2 at 0	% e	xcess O2 as a r	olling 7-day average		
Address:	4001 Ce	edar Point Ro	ad,	Oregon, Ohio 4	<u>3616</u>		
Monitor Manufacturer and Model No.:	ABB LIN	MAS 11UV ar	nd A	BB MAGNOS 1	06, SN: 3.340641.7		
Date of Latest CEMS Certification or Audit:							
Monitor Manufacturer and Model No.: ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7 Date of Latest CEMS Certification or Audit: 8/11/2021 Process Unit(s) Description: CO Boiler Exhaust, including FCC Regen Flue Gas, 0448020007P007 Total Source Operating Time in Reporting Period ² : 2,208 hr Emission Data Summary CEMS Perfomance Summary 1. Duration of excess emissions in reporting period due to: a. Start-up/Shutdown: b. Control equipment problems 0 b. Non-monitor equipment malfunctions b. Non-monitor equipment malfunctions							
Total Source Operating Time in Reporting Per	riod ² :	2,208	}	<u>hr</u>			
Emission Data Summary			CE	MS Perfomano	e Summary		
Duration of excess emissions in reporting per	iod due to	D:	1.	CEMS downtin	ne in reporting period due to:		
a. Start-up/Shutdown:		0		a. Monitor eq	uipment malfunctions	0	
b. Control equipment problems		0		b. Non-monito	or equipment malfunctions	0	
c. Process Problems		0		c. Quality ass	urance calibration	0	
d. Other known causes		0		d. Other know	n causes	0	
e. Unknown causes		0		e. Unknown c	auses	0	
Total duration of excess emissions		0	2.	Total CEMS D	owntime	0	
3. Total duration of excess emissions x (100) / [Total source operating time] % ³		0	3.	[Total CEMS Doperating time]	owntime] x (100) / [Total source % ³	0.00	
					operating time or the total CMS downtime is excess emission report shall be submitted.	5 percent or	
Describe any changes since last quarter in CI Not Applicable - No changes since the previous quart I certify that the information contained in this	er.	·					
Name: Des Gillen							
DocuSigned by:			-				
Signature: Des Gillen			_				

Title:

Date:

President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

Pollutant: SO ₂											
Reporting Period Dates:	From:	July 1, 2021	=	To:	October 1, 2021						
Company:	BP-Husl	BP-Husky Refining LLC									
Emission Limitation:	160 ppm	60 ppmvd SO2 at 0% excess O2 as a rolling 365-day average									
Address:	4001 Ce	001 Cedar Point Road, Oregon, Ohio 43616									
Monitor Manufacturer and Model No.:	ABB LIM	BB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7									
Date of Latest CEMS Certification or Audit:	8/11/202	21									
Process Unit(s) Description:	CO Boile	r Exhaust, incl	luding FC	C Regen Fl	ue Gas, 0448020007P007						
Total Source Operating Time in Reporting Pe	riod ² :	2,208	hr	-	-						
Emission Data Summary			CEMS	Perfoman	ce Summary						
1. Duration of excess emissions in reporting pe	riod due to):	1. CE	MS downtii	ne in reporting period due to:						
a. Start-up/Shutdown:		0	a.	Monitor eq	uipment malfunctions	0					
b. Control equipment problems		0	b.	Non-monit	or equipment malfunctions	0					
c. Process Problems		0	C.	Quality as:	surance calibration	0					
d. Other known causes		0	d.	Other know	vn causes	0					
e. Unknown causes		0	e.	Unknown	causes	0					
Total duration of excess emissions		0	2. Tot	al CEMS D	owntime	0					
3. Total duration of excess emissions x (100) /		0	_		Downtime] x (100) / [Total source	0.00					
[Total source operating time] % ³			оре	erating time	.] % ³						
					operating time or the total CMS downtime is xcess emission report shall be submitted.	5 percent or					
Describe any changes since last quarter in C Not Applicable - No changes since the previous quart I certify that the information contained in this Name: Des Gillen Docussigned by: Du Gillen	er.	·		complete.							
Title: President - BP-Husky Refining LL0	C		_								

Title:

Date:

¹ Form described in 40 CFR 60.7 (d)

Pollutant: SO ₂					
Reporting Period Dates:	From:	July 1, 2021	To:	October 1, 2021	
Company:	BP-Husl	ky Refining L	<u>LC</u>		
Emission Limitation:	1,020 to	ns SO2 per r	olling 12-month p	<u>eriod</u>	
Address:	4001 Ce	edar Point Ro	ad, Oregon, Ohio	<u>43616</u>	
Monitor Manufacturer and Model No.:			_	106, SN: 3.340641.7	
Date of Latest CEMS Certification or Audit:	8/11/202				
Process Unit(s) Description:	-	_	ludina FCC Reaen	Flue Gas, 0448020007P007	
Total Source Operating Time in Reporting Pe		2,208			
Emission Data Summary			CEMS Perfoma	nce Summary	
1. Duration of excess emissions in reporting pe	eriod due to):	1. CEMS down	time in reporting period due to:	
a. Start-up/Shutdown:		0	a. Monitor e	equipment malfunctions	0
b. Control equipment problems		0	b. Non-mor	itor equipment malfunctions	0
c. Process Problems		0	c. Quality a	ssurance calibration	0
d. Other known causes		0	d. Other kn	own causes	0
e. Unknown causes		0	e. Unknowr	causes	0
Total duration of excess emissions		0	2. Total CEMS	Downtime	0
3. Total duration of excess emissions x (100) /		0	_	Downtime] x (100) / [Total source	0.00
[Total source operating time] % ³ 2 Record all times in hours.			operating tim	ne] % ³	
³ For the reporting period: If the total duration of ex		•	•	I operating time or the total CMS downtime is excess emission report shall be submitted.	5 percent or
Describe any changes since last quarter in Control Not Applicable - No changes since the previous quarter in Control I certify that the information contained in this Name: Des Gillen Docusigned by: Des Gillen	ter.	·).	
Title: President - BP-Husky Refining LL	С		_		

Title:

Date:

¹ Form described in 40 CFR 60.7 (d)

Pollutant: SO ₂											
Reporting Period Dates:	From:	July 1, 2021		То	:	October 1, 2021					
Company:	BP-Hus	ky Refining L	LC								
Emission Limitation:	0.92 lb S	SO2 per 1000) lb (of fresh feed							
Address:	4001 Ce	4001 Cedar Point Road, Oregon, Ohio 43616 ABB LIMAS 11UV and ABB MAGNOS 106, SN: 3.340641.7									
Monitor Manufacturer and Model No.:	ABB LIN										
Date of Latest CEMS Certification or Audit:	8/11/2021										
Process Unit(s) Description:	CO Boile	r Exhaust, inc	ludin	g FCC Reger	ı Flu	ue Gas, 0448020007P007					
Total Source Operating Time in Reporting Per	iod²:	2,208	}	hr_							
Emission Data Summary			CE	MS Perfoma	anc	e Summary					
1. Duration of excess emissions in reporting per	iod due to):	1.	CEMS down	ntim	ne in reporting period due to:					
a. Start-up/Shutdown:		0		a. Monitor	equ	uipment malfunctions	0				
b. Control equipment problems		0		b. Non-mo	nito	r equipment malfunctions	0				
c. Process Problems		0		c. Quality	assı	urance calibration	0				
d. Other known causes		0		d. Other kr	าดพ	n causes	0				
e. Unknown causes		0		e. Unknow	n c	auses	0				
2. Total duration of excess emissions		0	2.	Total CEMS	S Do	owntime	0				
 Total duration of excess emissions x (100) / [Total source operating time] %³ 		0	3.	[Total CEM: operating ti		owntime] x (100) / [Total source %³	0.00				
						perating time or the total CMS downtime is cess emission report shall be submitted.	5 percent or				
Describe any changes since last quarter in CE Not Applicable - No changes since the previous quarter Leartify that the information contained in this	er.	·			•						
Name: Des Gillen DocuSigned by: Des Gillen Des Gillen	report is	true, accura	e, a	ини сотріє	.e.						

Title:

Date:

90F20640AD13450... President - BP-Husky Refining LLC

¹ Form described in 40 CFR 60.7 (d)

	BP-HUSKY REFINING LLC - FCC/CO BOILER SO2 CEMS REPORT 3RD QUARTER 2021										
	Reporting Requirement (choose one or both)			DEVIATION INFORMATION				CORRECTIVE ACTIONS /	WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION VERBAL	MALFUNCTION WRITTEN
EMISSIONS UNIT ID/Description		, Semi-	TO DETERMINE COMPLIANCE	DEVIATION DURATION DESCRIPTION AND		PROBABLE CAUSE FOR THE DEVIATION			REPORT DATE (If no reports were made, state "No Reports" in the space	REPORT DATE (If no reports were made, state "No Reports" in the space	
	Quarterly	Annual	COMPLIANCE	Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION		WEAGURES TAKEN	column)	below)	below)
P007 - FCCU / CO Boiler Bypass Stack	Yes	No	Continuous Emissions Monitoring System (CEMS)		No downtime or excess emissions during this reporting quarter.						

To:

#1 Claus Sulfur Recovery Unit with SCOT Unit (0448020007P009)

250 ppm SO₂ dry, 0% excess O₂ (12-hour average)

4001 Cedar Point Road, Oregon, Ohio 43616

Ametek Model 919, SN: ZB-919SP-10541-1

October 1, 2021

From: <u>July 1, 2021</u>

8/2/2021

BP-Husky Refining LLC

Total Source Operating Time in Reporting Period ² :	2,20	8 hr_	
Emission Data Summary		CEMS Perfomance Summary	
1. Duration of excess emissions in reporting period due to):	CEMS downtime in reporting period due to:	
a. Start-up/Shutdown:	215	a. Monitor equipment malfunctions	0
b. Control equipment problems	0	b. Non-monitor equipment malfunctions	0
c. Process Problems	0	c. Quality assurance calibration	0
d. Other known causes	0	d. Other known causes	1
e. Unknown causes	0	e. Unknown causes	0
2. Total duration of excess emissions	215	2. Total CEMS Downtime	1
3. Total duration of excess emissions x (100) /	9.74	3. [Total CEMS Downtime] x (100) / [Total source	0.05
[Total source operating time] %3		operating time] % ³	
		nt or greater of the total operating time or the total CMS downtime mary report form and the excess emission report shall be submitte	
Describe any changes since last quarter in CEMS, prod Not applicable - no changes from previous quarter.	cess, or co	ntrois.	
I certify that the information contained in this report is	true, accur	ate, and complete.	
Name: Des Gillen DocuSigned by:		_	
Signature: Des Gillen		_	

President - BP-Husky Refining LLC

Pollutant: SO₂

Company:

Address:

Reporting Period Dates:

Monitor Manufacturer and Model No.:

Process Unit(s) Description:

Date of Latest CEMS Certification or Audit:

90F20640AD13450..

¹ Form described in 40 CFR 60.7 (d)

Title:

Date:

Emission Limitation:

	BP-HUSKY REFINING LLC SRU #1 SO2 CEMS REPORT FOR 3RD QUARTER 2021											
EMISSIONS UNIT	Reporting Requirement (choose one or both)		ACTUAL METHOD USED	DEVIATION INFORMATION			CORRECTIVE ACTIONS /	WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE		
EMISSIONS UNIT ID/Description			TO DETERMINE COMPLIANCE	DEVIATION DUDATION		DESCRIPTION AND	DESCRIPTION AND THE DEVIATION			MALFUNCTION? (Yes or No - If Yes, continue to the next	(If no reports were made, state	
	Quarterly	Semi-Annual	COMPLIANCE	Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION		IZINEN	column)	below)	below)	
P009 - Sulfur Recovery Unit #1	Yes	No	Continuous Emission Monitoring System (CEMS)	9/20/2021 10:00	9/20/2021 11:00	CEMS Downtime for 1 Hour.	Monthly and quarterly PM completed	Recalibrated and Returned Analyzer to service.	No	N/A	N/A	
P009 - Sulfur Recovery Unit #1	Yes	No	Continuous Emission Monitoring System (CEMS)	7/12/2021 15:00	7/21/2021 14:00	CEMS excess emissions for 215 hours	Planned Start-up/Shutdown	Normal start-up/shutdown operational procedures were followed.	No	N/A	N/A	

Excess Emission and Monitoring System Performance Report SRU1 SO2 CEMS Report (Source # P009) 3Q 2021

In accordance with the applicable PTIs for this source, written reports of excess emissions shall include the following information:

1. The magnitude of excess emissions computed in accordance with §60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

During the 3rd quarter of 2021, SRU1 operated for a total of 2,208 hours. There was one (1) period of excess emissions for a total of 215 hours, which accounted for 9.74% of the source's operating time.

• 7/12/2021 at 15:00 hours to 7/21/2021 at 14:00 hours

Duration: 215 hours

2. Specific identification of each period of excess emissions that occurs during start-ups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

There was one period of excess emissions for this CEMS associated with a planned start-up and shutdown and it is listed below. Normal start-up/shutdown procedures were followed.

• 7/12/2021 at 15:00 hours to 7/21/2021 at 14:00 hours

Duration: 215 hours

3. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

While SRU1 was in operation, there was one (1) period of CEMS downtime. The details of this period of CEMS inoperability is detailed below:

- On September 20, 2021 at 10:00 hours, the analyzer was down due to quarterly and monthly preventative maintenance. Maintenance was completed and the analyzer was recalibrated and returned to service at 11:00 hours.
- Duration: 1 hour

Reporting Period Dates:	From:	July 1, 202	<u>21</u>	To: October 1, 2021		
Company:	BP-Husl	BP-Husky Refining LLC				
Emission Limitation:	250 ppm SO ₂ dry, 0% excess O ₂ (12-hour average) 4001 Cedar Point Road, Oregon, Ohio 43616 Ametek Model 919 and WDG-V, SN: ZX-919-10814-1 8/2/2021 Sulfur Recovery Units # 2 & #3 with TGT #2 (0448020007P037)					
Address:						
Monitor Manufacturer and Model No.:						
Date of Latest CEMS Certification or Audit:						
Process Unit(s) Description:						
Total Source Operating Time in Reporting Per	iod ² :	2,20	8	<u>hr</u>		
Emission Data Summary			CE	MS Perfomance Summary		
1. Duration of excess emissions in reporting per	iod due to:		1.	CEMS downtime in reporting period due to:		
a. Start-up/Shutdown:				a. Monitor equipment malfunctions	0	
b. Control equipment problems				b. Non-monitor equipment malfunctions	0	
c. Process Problems				c. Quality assurance calibration	0	
d. Other known causes				d. Other known causes	2	
e. Unknown causes				e. Unknown causes	0	
Total duration of excess emissions			2.	Total CEMS Downtime	2	
3. Total duration of excess emissions x (100) /		0.00	3.	[Total CEMS Downtime] x (100) / [Total source	0.09	
[Total source operating time] % ³ 2 Record all times in hours.				operating time] % ³		
³ For the reporting period: If the total duration of exc		•		greater of the total operating time or the total CMS downtim summary report form and the excess emission report shall be		
Describe any changes since last quarter in CE Not applicable - no changes from previous qu I certify that the information contained in this	arter.	·				
Name: Des Gillen			-			
Signature: Des Gilles 90F20640AD13450			-			
Title: President - BP-Husky Refining LLC	;		_			

Date:

Pollutant: SO₂

¹ Form described in 40 CFR 60.7 (d)

	BP-HUSKY REFINING LLC SRU #2 & SRU #3 SO2 CEMS REPORT FOR 3RD QUARTER 2021										
EMISSIONS UNIT ID / Description	Reporting Requirement (choose one or both)			DEVIATION INFORMATION				WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE	
	Quarterly Sem		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION DURATION DESCRIPTION AND		PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN		(If no reports were made, state "No Reports" in the space		
		Semi-Annual		Date / Time Start	Date / Time End	MAGNITUDE OF THE DEVIATION			column)	below)	below)
P037 - Sulfur Recovery Units #2 & #3	Yes	No	Continuous Emission Monitoring System (CEMS)	9/20/2021 13:00	9/20/2021 15:00	CEMS Downtime for 2 Hours.	Monthly and quarterly PM completed.	Recalibrated and Returned Analyzer to service.	No	N/A	N/A

Additional Information Required under PTI # 04-1046

1. Total SO₂ emissions during calendar quarter (in tons), including any excess emissions attributed to the malfunction, startup, or shutdown of emissions unit P037. (ST&C III.A.iii)

Total SO₂ emissions from the TRP SRUs during the period July 1, 2021 through September 30, 2021 were calculated at 11.1 tons.

2. Total operating time of the CEMS while either SRU was online. (ST&C III.A.iii)

During the quarter, the total source operating time while either or both SRUs were in service was 2,208 hours. The CEMS was online and monitoring for 2,206 hours while either SRU was in service.

During the quarter, there were no periods of CEMS out-of-control time and one (1) period of CEMS downtime for a total duration of 2 hours. Details of this event are summarized in the table attached.

3. Quantification of emissions routed from the SRU to the flare beginning with activation of the relief valve until the release is over. (ST&C VII.A)

There were no periods during the 3rd quarter when acid gas was sent to the TRP Acid Gas flare.

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

CACECOO AND OF ACTIVE	KOLOO L		A110 III		OTOTEM TERRITOR		
Pollutant: NOx							
Reporting Period Dates:	From:	July 1, 20	<u>21</u>	To:	October 1, 2021		
Company:	BP-Husky Refining LLC						
Address:	4001 Cedar Point Road, Oregon, Ohio 43616						
Monitor Manufacturer and Model No.:				BB MAGNOS			
Monitor Location:					ick; monitor housed at ground leve	l in an	
				the boiler.	ion, mormor nousea at greatia leve	<u> </u>	
Date of Latest CMS Cert or Audit:	7/20/202	<u>21</u>					
Process Unit(s) Description:	East Als	stom Boile	(04480	20007B034)	1		
Total Source Operating Time in Reporting I	Period:	2,20	8 hr	•	gas was combusted for 0 hours and n ousted for 2,208 hours for a total of 2, er)	•	
CMS operating time while emission unit wa	s in ope	ration:	2,208	hr	,		
Emission Limitation:	12.71 lb	hr of NO _x	emissic	ons;			
	38.5 ton	s/rolling 1	2-month	period of N	O _x emissions (combined B034 & B	<u>035);</u>	
	0.10 lb l	NO _x (as No	O_2) per i	mmBtu heat	input 30-day rolling average		
Emission Data Summary			CMS P	erfomance	Summary		
1. Duration of excess emissions in reporting	period du	e to:	1. CM	IS downtime	in reporting period due to:		
a. Start-up/Shutdown:		0	a. Monitor equipment malfunctions			0	
b. Control equipment problems		0	b.	Non-monit	or equipment malfunctions	0	
c. Process Problems		0	C.		surance calibration	0	
d. Other known causes		0	d.	Other know		0	
e. Unknown causes		0	е.	Unknown		0	
2. Total duration of excess emissions3. Total duration of excess emissions x (100)	1	0		tal CMS Do	wntime x (100) / [Total source	0	
[Total source operating time] % ³	/	0		erating time]	- ` / -	0.00	
2 Record all times in hours.		l				l	
³ For the reporting period: If the total duration of	excess em	issions is 1	ercent or	greater of the	total operating time or the total CMS down	ntime is 5	
Describe any changes since last quarter in	CMS, pr	ocess, or	contro	ls.			
Not applicable - No changes since last quarter.							
•	_			_			
I certify that the information contained in the	ııs repor	t is true, a	ccurate	e, and comp	nete.		
Name: Des Gillen			_				
DocuSigned by:							
Signature: Des Gillen			-				
Title: President - BP-Husky Refining L	LC						

Date:

¹ Form described in 40 CFR 60.7 (d)

BP-HUSKY REFINING LLC - EAST ALSTOM BOILER NOx CEMS REPORT FOR 3RD QUARTER 2021

		Reporting Requirement (choose one or both) ACTUAL METHOD USED		DEVIATION INFORMATION		PROBABLE CAUSE		WAS DEVIATION ATTRIBUTABLE TO A	MALFUNCTION VERBAL REPORT DATE	MALFUNCTION WRITTEN REPORT DATE		
EM	IISSIONS UNIT ID/Description	Quarterly	Semi-Annual	TO DETERMINE COMPLIANCE	DEVIATION Date / Time Start	DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION	DESCRIPTION AND DEVIATION MAGNITUDE		If Ves continue to the next	(If no reports were made, state "NO REPORTS" in the space below)	(If no reports were made, state "NO REPORTS" in the space below)
	B034 - Eest Alstom Boiler	Yes	No	Continuous Monitoring System				No downtim	e or excess emissions	during this reporting quarter.		

East Alstom Boiler - 3rd Quarter 2021 Db Data

NSPS Db: Supplemental Reporting for NO_x CEM Records as required by 40 CFR 49b(i)

This table contains the information required by 60.49(g)(1-8). Records for (g)(9-10) are provided in the NSPS Quarterly CEMS Report.

East Alstom Boiler (B034): 353 MMBtu/hr heater fired with refinery fuel gas and/or natural gas

Calculation Methodology: NO_x emissions (lb/mmbtu) calculated from NO_x CEM (ppm) using Methodology in 40 CFR 60 Appendix A Method 19 and F factor of 8710 dscf/mmbtu from Method 19 Table 19-1 when natural gas fired; site-specific F factor determined from fuel analysis when refinery fuel gas fired.

NSPS Limit: 0.10 lb NO₂/MMBtu

		14373	Lillit. U.	ע או מו טר _x /	
Date	Hourly daily average NOx (lb/MMBtu)	30-day rolling average NOx (lb/MMBtu)	Excess Emissions (yes/no)	NOx Conc Exceeded CEM Span? (yes/no)	Comments: Reason for Missing or Invalid Data, or Excess Emissions
7/1/2021	0.021	0.022	No	No	
7/2/2021	0.023	0.022	No	No	
7/3/2021	0.025	0.022	No	No	
7/4/2021	0.023	0.023	No	No	
7/5/2021	0.022	0.022	No	No	
7/6/2021	0.022	0.022	No	No	
7/7/2021	0.022	0.022	No	No	
7/8/2021	0.022	0.022	No	No	
7/9/2021	0.022	0.022	No	No	
7/10/2021	0.024	0.022	No	No	
7/11/2021	0.022	0.022	No	No	
7/12/2021	0.022	0.022	No	No	
7/13/2021	0.022	0.022	No	No	
7/14/2021	0.021	0.023	No	No	
7/15/2021	0.020	0.023	No	No	
7/16/2021	0.019	0.023	No	No	
7/17/2021	0.020	0.023	No	No	
7/18/2021	0.019	0.022	No	No	
7/19/2021	0.022	0.022	No	No	
7/20/2021	0.019	0.022	No	No	
7/21/2021	0.017	0.022	No	No	
7/22/2021	0.016	0.022	No	No	
7/23/2021	0.016	0.021	No	No	
7/24/2021	0.017	0.021	No	No	
7/25/2021	0.021	0.021	No	No	
7/26/2021	0.025	0.021	No	No	
7/27/2021	0.022	0.021	No	No	
7/28/2021	0.024	0.021	No	No	
7/29/2021	0.022	0.021	No	No	
7/30/2021	0.024	0.021	No	No	
7/31/2021	0.025	0.021	No	No	
8/1/2021	0.024	0.021	No	No	
8/2/2021	0.026	0.021	No	No	
8/3/2021	0.026	0.022	No	No	
8/4/2021	0.026	0.022	No	No	
8/5/2021	0.026	0.022	No	No	
8/6/2021	0.026	0.022	No	No	
8/7/2021	0.025	0.022	No	No	
8/8/2021	0.025	0.022	No	No	
8/9/2021	0.028	0.022	No	No	
8/10/2021	0.032	0.023	No	No	
8/11/2021	0.031	0.023	No	No	
8/12/2021	0.031	0.023	No	No	
8/13/2021	0.029	0.023	No	No	
8/14/2021	0.029	0.024	No	No	
8/15/2021	0.030	0.024	No	No	
8/16/2021	0.025	0.024	No	No	
8/17/2021	0.021	0.024	No	No	
8/18/2021	0.021	0.024	No	No	
8/19/2021	0.019	0.024	No	No	
8/20/2021	0.018	0.024	No	No	
8/21/2021	0.017	0.024	No	No	
8/22/2021	0.017	0.024	No	No	
8/23/2021	0.018	0.024	No	No	
8/24/2021	0.018	0.024	No	No	
8/25/2021	0.018	0.024	No	No	
5,25,2521	0.010	U.UL 1			l .

Date	Hourly daily average NOx (lb/MMBtu)	30-day rolling average NOx (lb/MMBtu)	Excess Emissions (yes/no)	NOx Conc Exceeded CEM Span? (yes/no)	Comments: Reason for Missing or Invalid Data, or Excess Emissions
8/26/2021	0.021	0.024	No	No	
8/27/2021	0.022	0.024	No	No	
8/28/2021	0.022	0.024	No	No	
8/29/2021	0.023	0.024	No	No	
8/30/2021	0.023	0.024	No	No	
8/31/2021	0.024	0.024	No	No	
9/1/2021	0.025	0.024	No	No	
9/2/2021	0.020	0.024	No	No	
9/3/2021	0.020	0.023	No	No	
9/4/2021	0.021	0.023	No	No	
9/5/2021	0.017	0.023	No	No	
9/6/2021	0.018	0.023	No	No	
9/7/2021	0.019	0.023	No	No	
9/8/2021	0.023	0.022	No	No	
9/9/2021	0.023	0.022	No	No	
9/10/2021	0.024	0.022	No	No	
9/11/2021	0.023	0.023	No	No	
9/12/2021	0.022	0.023	No	No	
9/13/2021	0.023	0.023	No	No	
9/14/2021	0.024	0.022	No	No	
9/15/2021	0.022	0.022	No	No	
9/16/2021	0.022	0.022	No	No	
9/17/2021	0.022	0.022	No	No	
9/18/2021	0.021	0.022	No	No	
9/19/2021	0.019	0.021	No	No	
9/20/2021	0.020	0.021	No	No	
9/21/2021	0.020	0.021	No	No	
9/22/2021	0.025	0.021	No	No	
9/23/2021	0.026	0.022	No	No	
9/24/2021	0.029	0.022	No	No	
9/25/2021	0.028	0.022	No	No	
9/26/2021	0.028	0.022	No	No	
9/27/2021	0.027	0.023	No	No	
9/28/2021	0.023	0.023	No	No	
9/29/2021	0.024	0.023	No	No	
9/30/2021	0.024	0.023	No	No	

FIGURE 1 - SUMMARY REPORT GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE¹

Pollutant: NOx							
Reporting Period Dates:	From:	July 1, 20	<u>21</u>	To:	October 1, 2021		
Company:	BP-Husky Refining LLC						
Address:	4001 Ce	dar Point	Road, Ore	gon, Ohic	<u> 43616</u>		
Monitor Manufacturer and Model No.:	ABB LIM	MAS 11UV	and ABB	MAGNOS	3 O2		
Monitor Location:		port on W			ack; monitor housed at ground lev	el in an	
Date of Latest CMS Certification or Audit:	7/29/202	<u>21</u>					
Process Unit(s) Description:		stom Boile	r (044802		5) as was combusted for 2,208 hours ar	nd natural	
Total Source Operating Time in Reporting Pe	eriod:	2,20		gas was co	ombusted for 0 hours for a total of 2,2		
CMS operating time while emission unit was	in opera	tion:		this quarte hr	r)		
Emission Limitation:	12.71 lb	/hr of NO _x	emissions	s;	_		
					O _x emissions (combined B034 & B	8035) <u>;</u>	
	0.10 lb N	NO _x (as NO	O ₂) per mn	nBtu heat	input 30-day rolling average		
Emission Data Summary					Summary		
Duration of excess emissions in reporting per	eriod due 1			in reporting period due to:			
a. Start-up/Shutdown:		0		ipment malfunctions	0		
b. Control equipment problems		0	b. N	0			
c. Process Problems		0	c. Q	0			
d. Other known causes		0		ther know		0	
e. Unknown causes		0		nknown ca		0	
2. Total duration of excess emissions		0		CEMS Do		0	
3. Total duration of excess emissions x (100) / [Total source operating time] % ³		0	_	ating time]	wntime] x (100) / [Total source % ³	0.00	
Record all times in hours. For the reporting period: If the total duration of example 1. If the total duration of example 2. If the example 2. If the total duration of example 2. If the example 2. If	vcass amiss	sions is 1 ne	rcent or are	ater of the to	otal operating time or the total CMS dowr	ntime is 5	
1 31		-		ater or the to	otal operating time of the total civio dowl	idille is 5	
Describe any changes since last quarter in C	ivis, proc	ess, or co	ontrois.				
Not applicable - No changes since last quarter.							
I certify that the information contained in this	s report is	s true, acc	curate, an	d comple	te.		
Name: Des Gillen							
Signature: DocuSigned by:							
Des Gillen Title: PressidentAp BFAHusky Refining LLC							
	· -						
Date:							

¹ Form described in 40 CFR 60.7 (d)

BP-HUSKY REFINING LLC - WEST ALSTOM BOILER NOx CEMS REPORT FOR 3RD QUARTER 2021 Reporting Requirement DEVIATION (choose one or both) INFORMATION WAS DEVIATION MALFUNCTION VERBAL MALFUNCTION WRITTEN ACTUAL METHOD CORRECTIVE ATTRIBUTABLE TO A REPORT DATE PROBABLE CAUSE REPORT DATE EMISSIONS UNIT USED TO ACTIONS / **DEVIATION DURATION** FOR THE MALFUNCTION? (Yes or No -(If no reports were made, state (If no reports were made, state DESCRIPTION AND DETERMINE PREVENTATIVE ID/Description DEVIATION "NO REPORTS" in the space "NO REPORTS" in the space If Yes, continue to the next Quarterly Semi-Annual COMPLIANCE MAGNITUDE MEASURES TAKEN Date / Time Date / Time column) below) OF THE DEVIATION Start End B035 - West Continuous Yes No No downtime or excess emissions during this reporting quarter. Alstom Boiler Monitoring System

West Alstom Boiler - 3rd Quarter 2021 Db Data

NSPS Db: Supplemental Reporting for NO_x CEM Records as required by 40 CFR 49b(i)

This table contains the information required by 60.49(g)(1-8). Records for (g)(9-10) are provided in the NSPS Quarterly CEMS Report.

West Alstom Boiler (B035): 353 MMBtu/hr heater fired with refinery fuel gas and/or natural gas

Calculation Methodology: NO_x emissions (lb/mmbtu) calculated from NO_x CEM (ppm) using Methodology in 40 CFR 60 Appendix A Method 19 and F factor of 8710 dscf/mmbtu from Method 19 Table 19-1 when natural gas fired; site-specific F factor determined from fuel analysis when refinery fuel gas fired.

NSPS Limit: 0.10 lb NO_x/MMBtu

		1101 0	Lilling. U.		MINIDLA
Date	Hourly daily average NOx (lb/MMBtu)	30-day rolling average NOx (lb/MMBtu)	Excess Emissions (yes/no)	NOx Conc Exceeded CEM Span? (yes/no)	Comments: Reason for Missing or Invalid Data, or Excess Emissions
7/1/2021	0.024	0.021	No	No	
7/2/2021	0.026	0.022	No	No	
7/3/2021	0.025	0.022	No	No	
7/4/2021	0.023	0.022	No	No	
7/5/2021	0.022	0.022	No	No	
7/6/2021	0.023	0.022	No	No	
7/7/2021	0.023	0.022	No	No	
7/8/2021	0.022	0.022	No	No	
7/9/2021	0.021	0.022	No	No	
7/10/2021	0.021	0.022	No	No	
7/11/2021	0.021	0.021	No	No	
7/12/2021	0.021	0.021	No	No	
7/13/2021	0.021	0.021	No	No	
7/13/2021	0.021	0.021	No	No	
7/15/2021	0.021	0.020	No	No	
7/16/2021	0.021	0.020	No No	No No	
			No No	No No	
7/17/2021	0.021	0.019	No No		
7/18/2021	0.021	0.018		No	
7/19/2021	0.021	0.018	No	No	
7/20/2021	0.021	0.017	No	No	
7/21/2021	0.021	0.016	No	No	
7/22/2021	0.021	0.015	No	No	
7/23/2021	0.021	0.014	No	No	
7/24/2021	0.021	0.014	No	No	
7/25/2021	0.021	0.013	No	No	
7/26/2021	0.024	0.013	No	No	
7/27/2021	0.019	0.013	No	No	
7/28/2021	0.031	0.013	No	No	
7/29/2021	0.019	0.013	No	No	
7/30/2021	0.019	0.013	No	No	
7/31/2021	0.020	0.013	No	No	
8/1/2021	0.022	0.013	No	No	
8/2/2021	0.023	0.012	No	No	
8/3/2021	0.022	0.012	No	No	
8/4/2021	0.020	0.012	No	No	
8/5/2021	0.020	0.012	No	No	
8/6/2021	0.020	0.012	No	No	
8/7/2021	0.019	0.012	No	No	
8/8/2021	0.018	0.012	No	No	
8/9/2021	0.023	0.012	No	No	
8/10/2021	0.033	0.012	No	No	
8/11/2021	0.028	0.013	No	No	
8/12/2021	0.029	0.014	No	No	
8/13/2021	0.032	0.015	No	No	
8/14/2021	0.034	0.016	No	No	
8/15/2021	0.033	0.017	No	No	
8/16/2021	0.029	0.018	No	No	
8/17/2021	0.024	0.019	No	No	
8/18/2021	0.023	0.020	No	No	
8/19/2021	0.025	0.020	No	No	
8/20/2021	0.020	0.020	No	No	
8/21/2021	0.020	0.021	No	No	
8/22/2021	0.019	0.022	No	No	
8/23/2021	0.017	0.022	No	No	
8/24/2021	0.019	0.023	No No	No No	
8/25/2021	0.020			No No	
		0.023	No No		
8/26/2021	0.022	0.023	No	No	

Date	Hourly daily average NOx (lb/MMBtu)	30-day rolling average NOx (lb/MMBtu)	Excess Emissions (yes/no)	NOx Conc Exceeded CEM Span? (yes/no)	Comments: Reason for Missing or Invalid Data, or Excess Emissions
8/27/2021	0.021	0.023	No	No	
8/28/2021	0.021	0.023	No	No	
8/29/2021	0.024	0.023	No	No	
8/30/2021	0.026	0.024	No	No	
8/31/2021	0.027	0.024	No	No	
9/1/2021	0.027	0.024	No	No	
9/2/2021	0.021	0.024	No	No	
9/3/2021	0.020	0.024	No	No	
9/4/2021	0.019	0.024	No	No	
9/5/2021	0.019	0.024	No	No	
9/6/2021	0.019	0.024	No	No	
9/7/2021	0.018	0.024	No	No	
9/8/2021	0.020	0.024	No	No	
9/9/2021	0.021	0.023	No	No	
9/10/2021	0.021	0.023	No	No	
9/11/2021	0.020	0.023	No	No	
9/12/2021	0.020	0.022	No	No	
9/13/2021	0.021	0.022	No	No	
9/14/2021	0.021	0.021	No	No	
9/15/2021	0.021	0.021	No	No	
9/16/2021	0.020	0.021	No	No	
9/17/2021	0.020	0.021	No	No	
9/18/2021	0.020	0.021	No	No	
9/19/2021	0.019	0.021	No	No	
9/20/2021	0.019	0.021	No	No	
9/21/2021	0.019	0.021	No	No	
9/22/2021	0.024	0.021	No	No	
9/23/2021	0.025	0.021	No	No	
9/24/2021	0.023	0.021	No	No	
9/25/2021	0.022	0.021	No	No	
9/26/2021	0.021	0.021	No	No	
9/27/2021	0.021	0.021	No	No	
9/28/2021	0.021	0.021	No	No	
9/29/2021	0.022	0.021	No	No	
9/30/2021	0.021	0.021	No	No	

Attachment B – Data Assessment Report

Data Assessment Report - East Side Fuel Gas Mix Drum H2S CMS

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B008, B009, B010

CEMS Manufacturer: Siemens		Model #: Maxim II		CEMS Serial #: 30028039490020		
CEMS type: CEM Hydrogen Sulfide			CEMS sampling location: East Side Fuel Gas Mix Drum			
CEMS span values as per the applicable regulation:						
	<u>PPM</u>				<u>Percent</u>	
SO ₂			O ₂			
H₂S	300		CO ₂			

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for: (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for H₂S (ppm):

	H2S ((ppm)
	Audit #1	Audit #2
1. Date of audit	8/31/2021	8/31/2021
2. Cylinder ID number	CC416478	CC482384
Vendor	AirGas	AirGas
3. Date of certification	12/8/2020	11/11/2019
Expiration date	12/8/2023	11/11/2022
4. Type of certification	EPA Protocol	EPA Protocol
5. Certified audit value	74.18	163.50
6. CEMS response values	78.90	167.07
	74.87	164.32
	74.87	164.96
Average	76.21	165.45
7. Accuracy	2.74%	1.19%

C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

D. Corrective action for excessive inaccuracy.

- 1. Out-of-control periods.
 - a. Dates: None
 - b. Number of days: NA
- 2. Corrective action taken: NA
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)

II. Calibration drift assessment - See Tables B1 & B2

Data Assessment Report - TIU Fuel Gas Mix Drum H2S CMS

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B015, B017, B019, B022, B029, B030, B031, B032, B033, B034,

B035, P007

CEMS Manufacturer: Siemens	Model #: Maxim II			CEMS Serial #: 30020117999300	
CEMS type: Hydrogen Sulfide	eation: J Fuel Gas Mix D	rum			
CEMS span values as	per the applicable regulat	ion:			
	<u>PPM</u>			<u>Percent</u>	
SO ₂		O ₂			
H₂S	300	CO ₂			

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for: (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for H₂S (ppm):

	H2S (ppm)				
	Audit #1	Audit #2			
1. Date of audit	8/31/2021	8/31/2021			
2. Cylinder ID number	CC416478	CC482384			
Vendor	AirGas	AirGas			
3. Date of certification	12/8/2020	11/11/2019			
Expiration date	12/8/2023	11/11/2022			
4. Type of certification	EPA Protocol	EPA Protocol			
5. Certified audit value	74.18	163.50			
6. CEMS response values	72.90	163.52			
	73.87	164.32			
	76.85	184.16			
Average	74.54	170.67			
7. Accuracy	0.49%	4.39%			

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates: None
 - b. Number of days: NA
 - 2. Corrective action taken: NA
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - Reformer 3 Heater H₂S CMS

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B036

CEMS Manufacturer: Siemens		Model #: CE Maxim II			EMS Serial #: 30029994471080	
CEMS type: Hydrogen Sulfide		CEMS sampling location: Reformer 3 Heater Fuel Gas			as	
CEMS span values as p	per the ap	e applicable regulation:				
		PPM			<u>Percent</u>	
SO ₂			O ₂			
H ₂ S		300	CO ₂			

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for: (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for H₂S (ppm):

	H2S ((ppm)
	Audit #1	Audit #2
1. Date of audit	8/31/2021	8/31/2021
2. Cylinder ID number	CC416478	CC482384
Vendor	AirGas	AirGas
3. Date of certification	12/8/2020	11/11/2019
Expiration date	12/8/2023	11/11/2022
4. Type of certification	EPA Protocol	EPA Protocol
5. Certified audit value	74.18	163.50
6. CEMS response values	77.77	166.04
	81.21	165.81
	77.40	160.61
Average	78.79	164.15
7. Accuracy	6.21%	0.40%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates: None
 - b. Number of days: NA
 - 2. Corrective action taken: NA
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - East Flare H2S CMS

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P003

ī—————————————————————————————————————				
CEMS Manufacturer: Siemens	Model #: Maxim II		CEMS Serial #: 30050531960100	
CEMS type: Hydrogen Sulfide		CEMS sampling location: East Flare		
CEMS span values as per the applicable regulation:				
	<u>PPM</u>		<u>Percent</u>	
SO ₂		O ₂		
H₂S	300	CO ₂		

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for: (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for H₂S (ppm):

	H2S ((ppm)
	Audit #1	Audit #2
1. Date of audit	8/9/2021	8/9/2021
2. Cylinder ID number	CC416478	CC482384
Vendor	AirGas	AirGas
3. Date of certification	12/8/2020	11/11/2019
Expiration date	12/8/2023	11/11/2022
4. Type of certification	EPA Protocol	EPA Protocol
5. Certified audit value	74.18	163.50
6. CEMS response values	74.50	166.25
	76.18	165.50
	75.04	165.17
Average	75.24	165.64
7. Accuracy	1.43%	1.31%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates: None
 - b. Number of days: NA
 - 2. Corrective action taken: NA
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - West Flare H₂S CMS

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P004

CEMS Manufacturer: Siemens		Model #: Maxim II		CEMS	S Serial #: 30050531960400
CEMS type: Hydrogen Sulfide		CEMS sampling location: West Flare			
CEMS span values as	EMS span values as per the applicable regulation:				
		<u>PPM</u>			<u>Percent</u>
SO ₂			O ₂		
H₂S		300	CO ₂		

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for: (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for H₂S (ppm):

	H2S ((ppm)
	Audit #1	Audit #2
1. Date of audit	8/10/2021	8/10/2021
2. Cylinder ID number	CC416478	CC482384
Vendor	AirGas	AirGas
3. Date of certification	12/8/2020	11/11/2019
Expiration date	12/8/2023	11/11/2022
4. Type of certification	EPA Protocol	EPA Protocol
5. Certified audit value	74.18	163.50
6. CEMS response values	71.80	163.80
	74.90	160.20
	74.90	163.80
Average	73.87	162.60
7. Accuracy	-0.42%	-0.55%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates: None
 - b. Number of days: NA
 - 2. Corrective action taken: NA
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)

Data Assessment Report - East Flare TS CMS

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P003

CEMS Manufacturer: ThermoFisher		Model #: Sola II		CEMS Serial #: SL-10430115
CEMS type: Total Sulfur		CEMS sampling location: East Flare		
CEMS span values as	pan values as per the applicable regula			
		<u>PPM</u>		
TS (low)		3,500		
TS (high)		350,000		

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for: (Not Applicable)

B. Cylinder gas audit (CGA) for TS Low (ppm) and TS High (ppm):

	TS Low		TSI	High
	Audit #1	Audit #2	Audit #1	Audit #2
1. Date of audit	8/23/2021	8/23/2021	8/23/2021	8/23/2021
2. Cylinder ID number	CC427785	CC269487	CC121778	AA073391
Vendor	Airgas	Airgas	Airgas	Airgas
3. Date of certification	3/13/2019	4/27/2021	3/18/2019	3/7/2019
Expiration date	3/13/2022	4/27/2024	3/18/2022	3/7/2027
4. Type of certification	RATA Class	RATA Class	RATA Class	EPA Protocol
5. Certified audit value	884.0	1,931	87,110	192,500
6. CEMS response values	916.8	1,947	87,050	191,553
	906.6	1,975	87,601	191,542
	898.6	1,950	87,766	191,675
Average	907.3	1,957.3	87,472	191,590
7. Accuracy	2.64%	1.36%	0.42%	-0.47%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.

a. Dates: None

b. Number of days: NA

2. Corrective action taken: NA

3. Results of audit following corrective action. (Use format of A, B, or C above.)

II. Calibration drift assessment - See Tables B1 & B2

Data Assessment Report - West Flare TS CMS

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P004

CEMS Manufacturer: ThermoFisher	Model #: Sola II			CEMS Serial #: SL-10440115
CEMS type: Total Sulfur		CEMS sampling location: West Flare		
CEMS span values as	CEMS span values as per the applicable regula			
		<u>PPM</u>		
TS (low)		3,500		
TS (high)		350,000		

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for: (Not Applicable)

B. Cylinder gas audit (CGA) for TS Low (ppm) and TS High (ppm):

	TS Low		TS High	
	Audit #1	Audit #2	Audit #1	Audit #2
1. Date of audit	8/24/2021	8/24/2021	8/24/2021	8/24/2021
2. Cylinder ID number	CC315721	CC75507	CC62361	XC033782B
Vendor	Airgas	Airgas	Airgas	Airgas
3. Date of certification	3/13/2019	12/22/2020	3/18/2019	10/21/2020
Expiration date	3/13/2022	12/22/2023	3/18/2027	10/21/2021
4. Type of certification	RATA Class	RATA Class	RATA Class	RATA Class
5. Certified audit value	884.3	1,957.0	86,970	192,300
6. CEMS response values	873.6	1,919.0	89,576	193,577
	872.0	1,910.7	89,861	193,648
	878.2	1,930.8	89,537	194,672
Average	874.6	1,920.2	89,658	193,966
7. Accuracy	-1.10%	-1.88%	3.09%	0.87%

C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.

a. Dates: None

b. Number of days: NA

- 2. Corrective action taken: NA
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)

II. Calibration drift assessment - See Tables B1 & B2

Data Assessment Report – TIU Fuel Gas Mix Drum TS CMS

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B015, B017, B019, B022, B029, B030, B031, B032, B033, B034,

B035, P007

CEMS Manufacturer: ThermoFisher	Model #: Sola II			CEMS Serial #: SL-09030713
CEMS type: Total Sulfur		CEMS sampling	g location: J Fuel Gas Mix Drum	
CEMS span values as per the applicable regulation:				
		<u>PPM</u>		
TS		3,500		

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA) for: (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for:

	TS (ppm)
	Audit #1	Audit #2
1. Date of audit	9/1/2021	9/1/2021
2. Cylinder ID number	CC338715	CC218822
Vendor	Airgas	Airgas
3. Date of certification	3/13/2019	3/31/2020
Expiration date	3/13/2022	3/31/2023
4. Type of certification	RATA Class	RATA Class
5. Certified audit value	884.70	1844.00
6. CEMS response values	846.80	1889.30
	847.80	1876.80
	847.10	1867.20
Average	847.23	1877.77
7. Accuracy	-4.24%	1.83%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates: None
 - b. Number of days: NA
 - 2. Corrective action taken: NA
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - Reformer 3 Heater NO_x/O₂ CEM

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B036

O ₂ CEMS Manufacturer: ABB			odel #: CEN MAGNOS 106	
NO _x CEMS Manufacture ABB	r:	: Model #: LIMAS 11		MS Serial # 3.340287.1
CEMS sampling location	: Reformer 3 Heater	er 3 Heater stack		
CEMS span values as p	er the applicable regu	lation:		
	<u>PPM</u>	<u>Percent</u>		
SO ₂		O ₂		25
NO _x	200	CO ₂		

I. <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)

A. Relative accuracy test audit (RATA) for: (Not Applicable)

B. Cylinder gas audit (CGA) for O2 (%) and NOx (ppm):

		(0/)		,
	O2 (%)		NOx (ppm)
	Audit #1	Audit #2	Audit #1	Audit #2
1. Date of audit	8/6/2021	8/6/2021	8/6/2021	8/6/2021
2. Cylinder ID number	CC278207	BLM001313	BLM003126	LL10026
Vendor	Airgas	Scott	Scott	Airgas
3. Date of certification	11/20/2017	11/12/2013	10/21/2013	11/12/2019
Expiration date	11/20/2025	11/13/2021	10/22/2021	11/12/2027
4. Type of certification	RATA Class	RATA Class	RATA Class	RATA Class
5. Certified audit value	5.97	13.90	50.40	117.20
6. CEMS response values	5.97	13.94	44.96	115.24
	6.04	13.97	45.09	115.91
	6.06	13.98	45.13	115.55
Average	6.02	13.96	45.06	115.57
7. Accuracy	0.84%	0.43%	-10.60%	-1.39%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods: None
 - a. Dates:
 - b. Number of days:
 - 2. Corrective action taken:
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - East Alstom Boiler NO_x/O₂ CEM

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B034

O ₂ CEMS Manufacturer: ABB			CEMS Serial # 00400003357006	
NO _x CEMS Manufacture ABB	r:	Model #: LIMAS 11	CEMS Serial # 00400003362206	
CEMS sampling location	n: East Alstom Boiler stack			
CEMS span values as p	er the applicable regul	lation:		
	PPM Percent			
SO ₂	O ₂		20.0	
NO _x	100	CO ₂		

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audits (RATAs): (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for O₂ (%):

	O ₂			
	Audit #1	Audit #2	Audit #3	
1. Date of audit	7/20/2021	7/20/2021	7/20/2021	
2. Cylinder ID number	BLM005117	BAL5136	XC017553B	
Vendor	Airgas	Air Liquide	Airgas	
3. Date of certification	5/22/2020	8/30/2020	5/13/2020	
Expiration date	5/22/2028	8/30/2024	5/13/2028	
4. Type of certification	RATA Class	RATA Class	RATA Class	
5. Certified audit value	5.55	11.00	18.02	
6. CEMS response values	5.49	11.05	18.13	
	5.51	11.06	18.13	
	5.51	11.06	18.13	
Average:	5.50	11.06	18.13	
7. Accuracy	-0.90%	0.55%	0.61%	

Cylinder gas audit (CGA) for NO_x (ppm):

	NO _x				
	Audit #1	Audit #2	Audit #3		
1. Date of audit	7/20/2021	7/20/2021	7/20/2021		
2. Cylinder ID number	BAL5293	XL000366B	CC268000		
Vendor	Air Liquide	Airgas	Airgas		
3. Date of certification	11/2/2018	11/21/2017	2/3/2020		
Expiration date	11/2/2021	11/21/2025	2/3/2028		
4. Type of certification	RATA Class	RATA Class	RATA Class		
5. Certified audit value	23.53	54.79	91.02		
6. CEMS response values	23.45	54.62	90.02		
	23.69	54.83	90.25		
	23.78	54.59	89.74		
Average:	23.64	54.68	90.00		
7. Accuracy	0.47%	-0.20%	-1.12%		

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods. None
 - a. Dates:
 - b. Number of days:
 - 2. Corrective action taken:
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report – West Alstom Boiler NO_x/O₂ CEM

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: B035

ioo dilitir. Booo				
O ₂ CEMS Manufacturer: ABB		Model #: MAGNOS 106		S Serial # 0003354606
NO _x CEMS Manufacture ABB	r: N	Model #: LIMAS 11	CEMS Serial # 00400003361106	
CEMS sampling location	: West Alstom Boiler s	tom Boiler stack		
CEMS span values as p	er the applicable regula	ation:		
	PPM Percent			<u>Percent</u>
SO ₂		O ₂		20.0
NO _x	100	CO ₂		

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audits (RATAs): (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for O₂ (%):

		O ₂	
	Audit #1	Audit #2	Audit #3
1. Date of audit	7/29/2021	7/29/2021	7/29/2021
2. Cylinder ID number	BLM005117	BAL5136	XC017553B
Vendor	Airgas	Air Liquide	Airgas
3. Date of certification	5/22/2020	8/30/2020	5/13/2020
Expiration date	5/22/2028	8/30/2024	5/13/2028
4. Type of certification	RATA Class	RATA Class	RATA Class
5. Certified audit value	5.55	11	18.02
6. CEMS response values	5.51	11.04	18.02
	5.52	11.04	18.01
	5.52	11.04	18.02
Average:	5.52	11.04	18.02
7. Accuracy	-0.54%	0.36%	0.00%

B. Cylinder gas audit (CGA) for NO_x (ppm):

	NO _x				
	Audit #1	Audit #2	Audit #3		
1. Date of audit	7/29/2021	7/29/2021	7/29/2021		
2. Cylinder ID number	BAL5293	XL000366B	CC268000		
Vendor	Air Liquide	Airgas	Airgas		
3. Date of certification	11/2/2018	11/21/2017	2/3/2020		
Expiration date	11/2/2021	11/21/2025	2/3/2028		
4. Type of certification	RATA Class	RATA Class	RATA Class		
5. Certified audit value	23.53	54.79	91.02		
6. CEMS response values	23.86	54.50	90.19		
	23.42	54.95	90.29		
	24.38	54.81	91.33		
Average:	23.89	54.75	90.60		
7. Accuracy	1.53%	-0.07%	-0.46%		

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods. None
 - a. Dates:
 - b. Number of days:
 - 2. Corrective action taken:
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report – FCC/CO Boiler SO₂/NO_x/CO/O₂ CEM

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P007

area unit ii.						
O ₂ CEMS Manufacturer:		Model #:		CE	MS Serial #	
ABB		N	Magnos 106		3.340569.7	
SO ₂ CEMS Manufacture	r:	Mod	del #:	CE	MS Serial #	
ABB		L	imas 11 UV		3.340641.7	
NO _x CEMS Manufacture	r:		del #:	CE	MS Serial #	
ABB	ABB		Limas 11 UV		3.340641.7	
CO CEMS Manufacturer	Manufacturer: M		Model #:		CEMS Serial #	
ABB Automation	n	URAS- 26		3.347698.3		
CEMS sampling location	: CO Boiler stack					
CEMS span values as pe	er the applicable regu	ılatio	n:			
SO ₂	400 PPM	O ₂		10.0 %		
NO _x	350 PPM	со			1000 PPM	

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audits (RATAs): (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for O₂ (%) and SO₂ (ppm):

	O ₂ (percent)		SO ₂ (ppm)
	Audit #1	Audit #2	Audit #1	Audit #2
1. Date of audit	8/11/2021	8/11/2021	8/11/2021	8/11/2021
2. Cylinder ID number	ALM001730	CC423357	ALM001730	CC423357
Vendor	Scott	Airgas	Scott	Airgas
3. Date of certification	2/14/2017	2/14/2017	2/14/2017	2/14/2017
Expiration date	2/14/2025	2/14/2025	2/14/2025	2/14/2025
4. Type of certification	RATA Class	RATA Class	RATA Class	RATA Class
5. Certified audit value	2.49	5.53	98.98	219.40
6. CEMS response values	2.35	5.38	102.72	219.57
	2.35	5.38	105.30	222.21
	2.33	5.37	106.17	223.77
Average	2.34	5.38	104.73	221.85
7. Accuracy	-6.02%	-2.71%	5.81%	1.12%

B. Cylinder gas audit (CGA) for NO_x (ppm) and CO (ppm):

	NO _x (ppm)		CO (ppm)
	Audit #1	Audit #2	Audit #1	Audit #2
1. Date of audit	8/11/2021	8/11/2021	8/11/2021	8/11/2021
2. Cylinder ID number	XC030834B	CC222300	XC030834B	CC222300
Vendor	Airgas	Airgas	Airgas	Airgas
3. Date of certification	2/14/2017	2/14/2017	2/14/2017	2/14/2017
Expiration date	2/14/2025	2/14/2025	2/14/2025	2/14/2025
4. Type of certification	RATA Class	RATA Class	RATA Class	RATA Class
5. Certified audit value	80.86	187.80	249.50	551.00
6. CEMS response values	81.37	180.21	249.64	550.56
	84.74	179.76	250.33	551.07
	84.21	177.23	250.54	551.83
Average	83.44	179.07	250.17	551.15
7. Accuracy	3.19%	-4.65%	0.27%	0.03%

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods. None
 - a. Dates:
 - b. Number of days:
 - 2. Corrective action taken:
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report - FCC Regen Line SO₂/NO_x/CO/O₂/CO₂ CEM

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P007

SO ₂ CEMS Manufacture ABB	SO ₂ CEMS Manufacturer: ABB		CE	MS Serial # 3.240685.3
NO _x CEMS Manufacture ABB	r:	Model #: Limas 11 U\		MS Serial # 3.240682.3
CO CEMS Manufacturer ABB	:	Model #: URAS 14	CE	MS Serial # 3.240684.3
O ₂ CEMS Manufacturer:		Model #:	CE	MS Serial #
ABB		Magnos 206	Magnos 206 014001011953	
CO ₂ CEMS Manufacture ABB	er:	Model #: Limas 11 UV		MS Serial # 3.240682.3
CEMS sampling location	: FCC Regen Line sta	ack	•	
CEMS span values as pe	er the applicable regul	lation:		
SO ₂	500 PPM	O ₂		25.0 %
NOx	200 PPM	со		1000 PPM
CO ₂	50.0 %			

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audit (RATA): (Not applicable this quarter)
 - B. Cylinder gas audit (CGA) for O_2 (%) and SO_2 (ppm):

	O ₂ (pe	ercent)	SO ₂ (ppm)		
	Audit #1	Audit #2	Audit #1	Audit #2	
1. Date of audit	8/11/2021	8/11/2021	8/11/2021	8/11/2021	
2. Cylinder ID number	XL001104B	BLM004046	CC443275	CC82139	
Vendor	Airgas	Scott	Airgas	Airgas	
3. Date of certification	11/20/2017	11/19/2015	11/21/2017	11/21/2017	
Expiration date	11/20/2025	11/20/2023	11/21/2025	11/21/2025	
4. Type of certification	RATA Class	RATA Class	RATA Class	RATA Class	
5. Certified audit value	5.49	13.90	130.70	267.60	
6. CEMS response values	5.46	14.07	129.12	272.16	
	5.51	14.09	131.54	274.00	
	5.51	14.08	132.30	275.01	
Average	5.49	14.08	130.99	273.72	
7. Accuracy	0.00%	1.29%	0.22%	2.29%	

B. Cylinder gas audit (CGA) for NO_x (ppm) and CO (ppm):

	NO _x (ppm)		CO (ppm)		
	Audit #1	Audit #1 Audit #2		Audit #2	
1. Date of audit	8/11/2021	8/11/2021	8/11/2021	8/11/2021	
2. Cylinder ID number	LL34302	BAL3120	XL002639B	BAL3034	
Vendor	Airgas	Air Liquide	Airgas	Scott	
	11/21/2017	8/12/2014	11/6/2017	11/12/2013	
Date of certification					
Expiration date	11/21/2025	8/13/2022	11/6/2025	11/13/2021	
4. Type of certification	RATA Class	RATA Class	RATA Class	RATA Class	
5. Certified audit value	54.90	116.00	277.60	543.00	
6. CEMS response values	54.49	112.99	278.22	539.56	
	53.92	112.16	278.55	539.89	
	53.47	113.25	278.77	540.18	
Average	53.96	112.80	278.51	539.88	
7. Accuracy	-1.71%	-2.76%	0.33%	-0.57%	

B. Cylinder gas audit (CGA) for CO₂ (ppm):

	CO ₂ (ppm)		
	Audit #1	Audit #2	
1. Date of audit	8/11/2021	8/11/2021	
2. Cylinder ID number	ALM063125	CC472694	
Vendor	Scott	Scott	
3. Date of certification	9/24/2018	9/24/2018	
Expiration date	9/24/2026	9/24/2026	
4. Type of certification	RATA Class	RATA Class	
5. Certified audit value	13.11	27.20	
6. CEMS response values	13.78	27.94	
	13.87	27.97	
	13.89	27.99	
Average	13.85	27.97	
7. Accuracy	5.64%	2.83%	

C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)

D. Corrective action for excessive inaccuracy.

- 1. Out-of-control periods. None
 - a. Dates:
 - b. Number of days:
- 2. Corrective action taken:
- 3. Results of audit following corrective action. (Use format of A, B, or C above.)

II. Calibration drift assessment - See Tables B1 & B2

Data Assessment Report – Sulfur Recovery Unit (SRU #1) SO₂/O₂ CEM

Period ending date: September 30 Year: 2021

BP-Husky Refining LLC Company name: Plant name: Toledo Refinery

Source unit #: P009

SO ₂ CEMS Manufactur	er:	Model #:	<u> </u>	CEMS S	
Ametek		919	9		ZB-919SP-10541-1
O ₂ CEMS Manufacture	r:	Model #:		CEMS S	erial #:
Ametek		919	9		ZB-919SP-10541-1
CEMS sampling locatio	pling location: SRU Thermal Oxidizer				
CEMS span values as per the applicable regulation:					
	PPM	1			<u>Percent</u>
SO ₂	500		O ₂		10.0
NO _x			со	2	

- I. Accuracy assessment results (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audits (RATAs): (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for O₂ (%) and SO₂ (ppm):

	O ₂ pe	ercent	SO ₂ ppm		
	Audit #1	Audit #2	Audit #1	Audit #2	
1. Date of audit	8/2/2021	8/2/2021	8/2/2021	8/2/2021	
2. Cylinder ID number	ALM028323	CC13867	XC006260B	ALM004131	
Vendor	Airgas	Airgas	Airgas	Airgas	
3. Date of certification	2/6/2017	11/20/2017	2/24/2017	2/14/2017	
Expiration date	2/6/2025	11/20/2025	2/24/2025	2/14/2025	
4. Type of certification	RATA Class	RATA Class	RATA Class	EPA Protocol	
Certified audit value	2.52	5.98	124.00	268.70	
6. CEMS response values	2.63	6.14	115.48	259.68	
	2.65	6.15	122.95	265.48	
	2.65	6.15	120.97	265.78	
Average	2.64	6.15	119.80	263.65	
7. Accuracy	4.76%	2.84%	-3.39%	-1.88%	

- **C. Relative accuracy audit (RAA) for:** (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.

 - a. Dates:b. Number of days:
 - 2. Corrective action taken:
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Data Assessment Report – Sulfur Recovery Unit #2 and #3 (TRP SRU) SO₂/O₂ CEM

Period ending date: September 30 Year: 2021

Company name: BP-Husky Refining LLC Plant name: Toledo Refinery

Source unit #: P037

SO ₂ CEMS Manufactu	rer:	Model #:		CEMS Serial #:	
Ametek		919		ZX-919-1	0814-1
O ₂ CEMS Manufacture	er:	Model #:		CEMS Serial #:	
Ametek	Ametek			ZX-919-1	0814-1
CEMS sampling location	CEMS sampling location: TGT #2 Thermal Oxidizer stack				
CEMS span values as per the applicable regulation:					
	PPM Percent				<u>Percent</u>
SO ₂	Ę	500		O ₂	10.0
NO _x				CO ₂	

- **I.** <u>Accuracy assessment results</u> (Complete A, B, or C below for each CEMS or for each pollutant and diluent analyzer, as applicable.)
 - A. Relative accuracy test audits (RATAs): (Not Applicable this quarter)
 - B. Cylinder gas audit (CGA) for O₂ (%) and SO₂ (ppm):

	O ₂ percent		SO ₂ ppm		
	Audit #1	Audit #2	Audit #1	Audit #2	
1. Date of audit	8/2/2021	8/2/2021	8/2/2021	8/2/2021	
2. Cylinder ID number	ALM028323	CC13867	XC006260B	ALM004131	
Vendor	Airgas	Airgas	Airgas	Airgas	
3. Date of certification	2/6/2017	11/20/2017	2/24/2017	2/14/2017	
Expiration date	2/6/2025	11/20/2025	2/24/2025	2/14/2025	
4. Type of certification	RATA Class	RATA Class	RATA Class	EPA Protocol	
5. Certified audit value	2.52	5.98	124.00	268.70	
6. CEMS response values	2.48	5.96	123.41	265.17	
	2.50	5.96	130.89	268.99	
	2.50	5.95	133.03	267.77	
Average	2.49	5.96	129.11	267.31	
7. Accuracy	-1.19%	-0.33%	4.12%	-0.52%	

- C. Relative accuracy audit (RAA) for: (Not Applicable this quarter)
- D. Corrective action for excessive inaccuracy.
 - 1. Out-of-control periods.
 - a. Dates:
 - b. Number of days:
 - 2. Corrective action taken:
 - 3. Results of audit following corrective action. (Use format of A, B, or C above.)
- II. Calibration drift assessment See Tables B1 & B2

Table B1 - Calibration Drift Assessment; Out-of-Control Periods for Part 60

CEMS	Start Time	End Time	Hours	Corrective Action Taken
East Flare TS	8/23/2021 8:00	8/24/2021 9:00	25	Analyzer was recalibrated and returned to service.

Table B2 – Calibration Drift Assessment; Out-of-Control Periods for Part 63

CEMS	Start Time	End Time	Hours	Corrective Action Taken
N/A				

Per 40 CFR Part 63.8(c)(7)(i), a CMS is out of control if the zero, mid-level, or high-level calibration drift (CD) exceeds two times the applicable CD specification in the applicable performance specification or in the relevant standard. These instances are reported in Table B2 above.